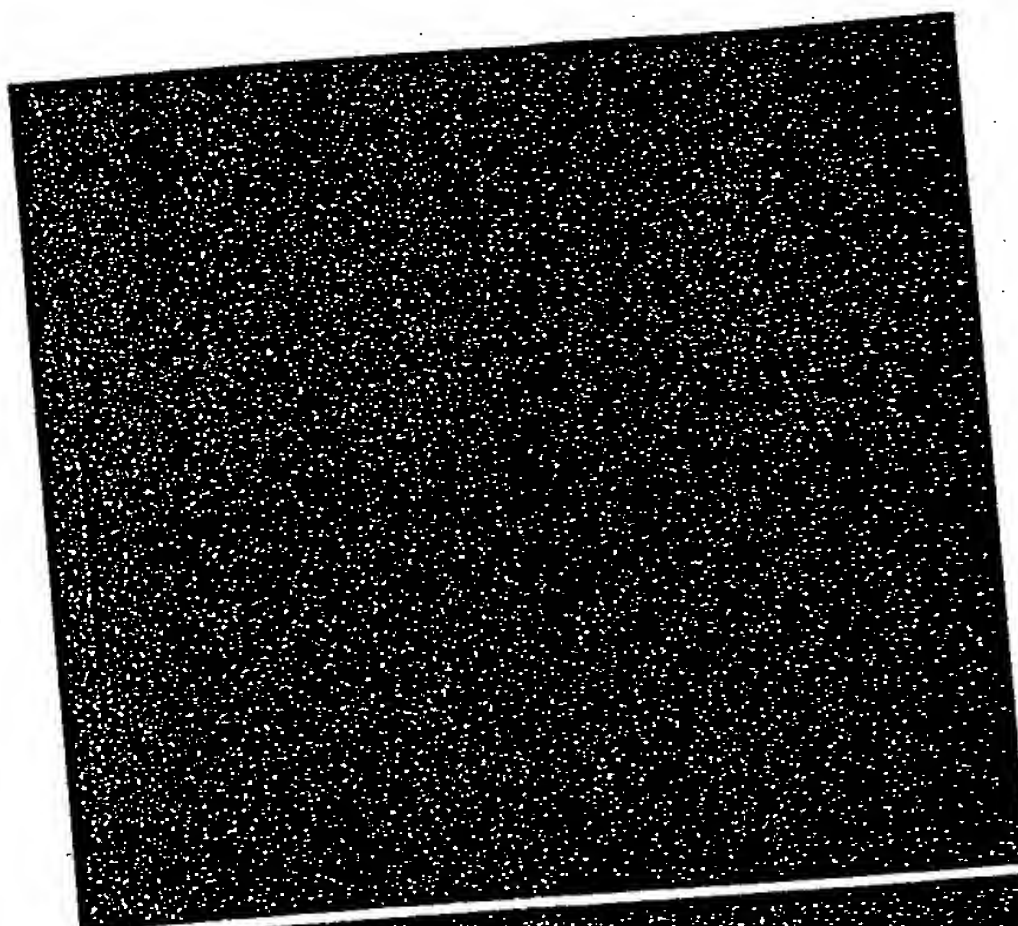


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FITC-SA



FITC-εp96

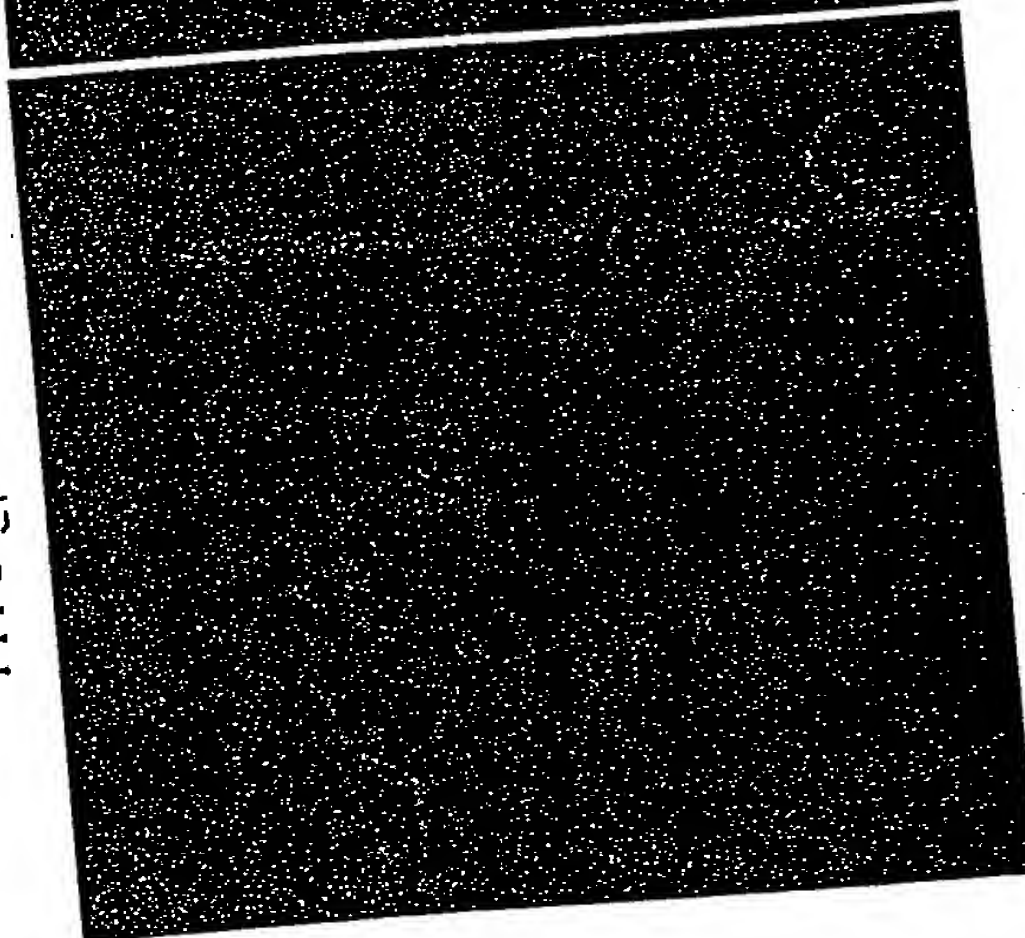


FIG. 1a

Membranes from	RAW264.7	P815
Affinity column	gp96	gp96
212		
116		
83		
51		
35		
28		

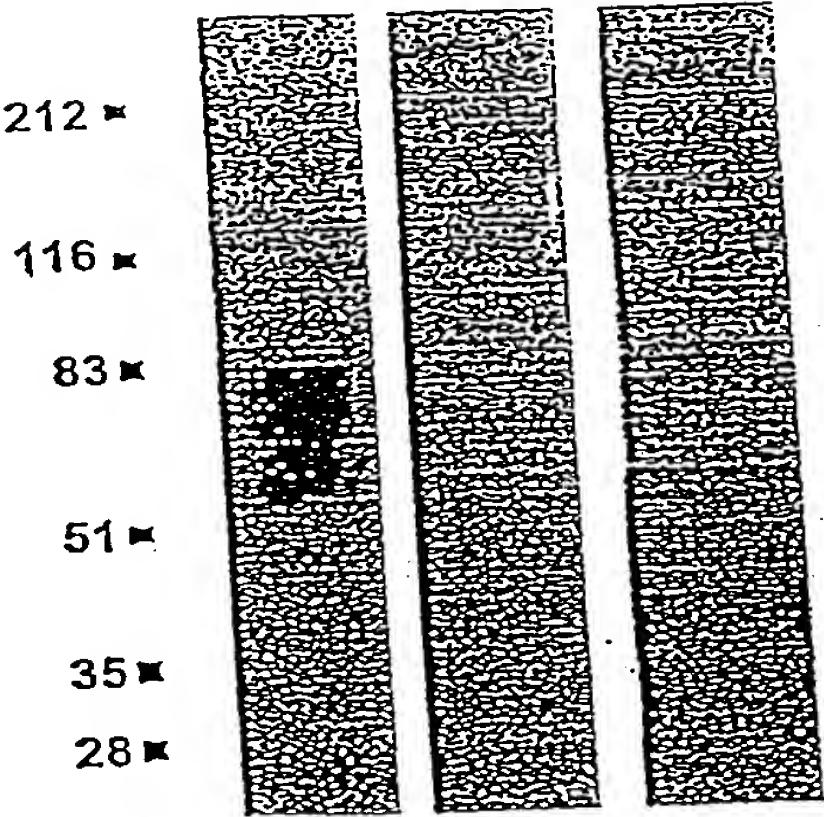


FIG. 1b

Cells	MO	MO	MO	P815
^{125}I -SASD-gp96	+	+	+	+
UV	+	-	+	+
2-ME	+	+	-	+

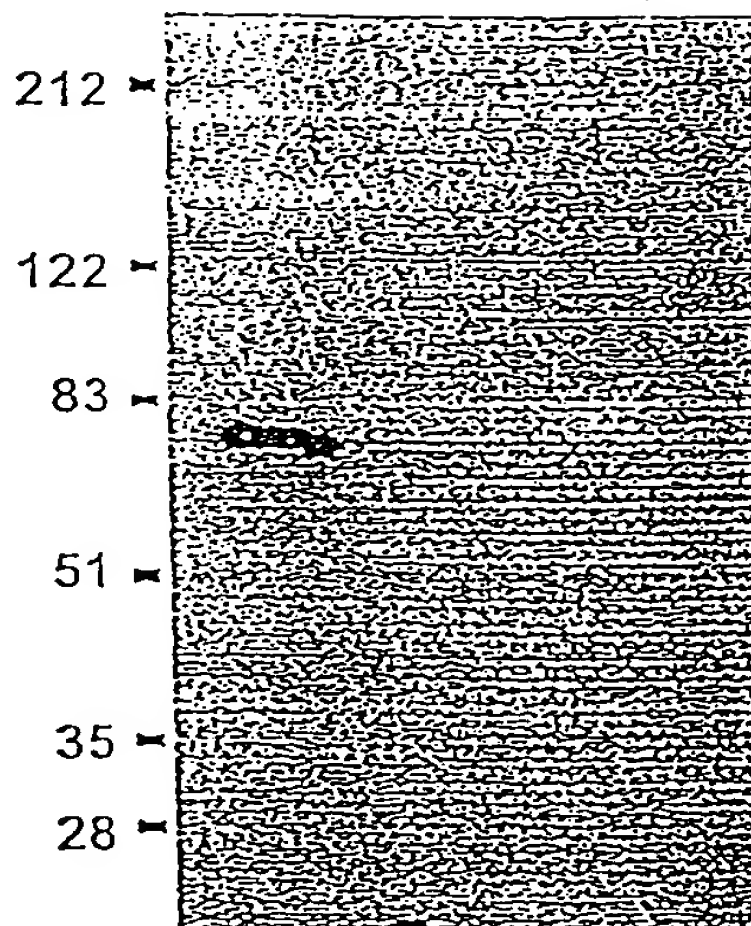


FIG. 1c

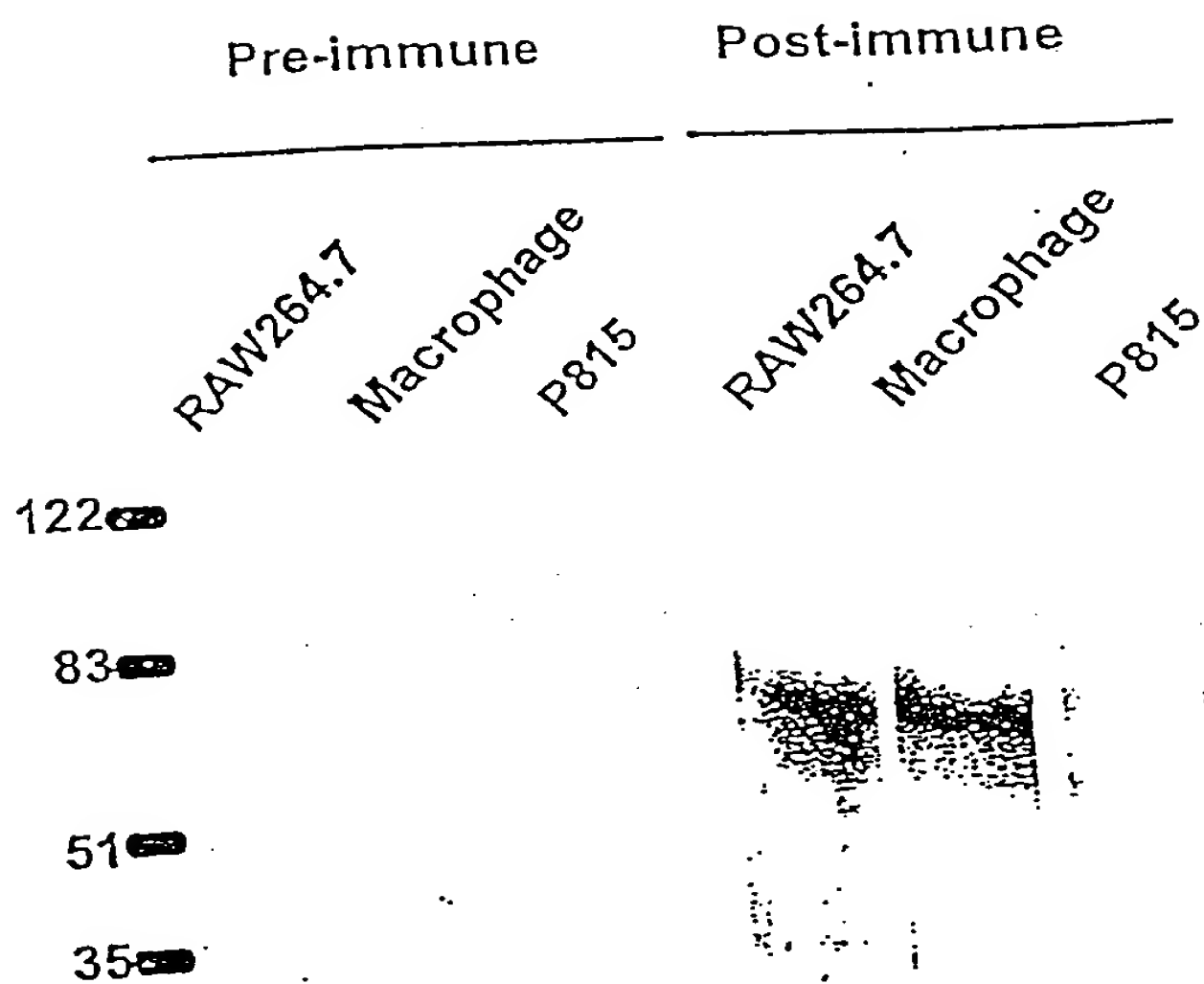


FIG. 2a

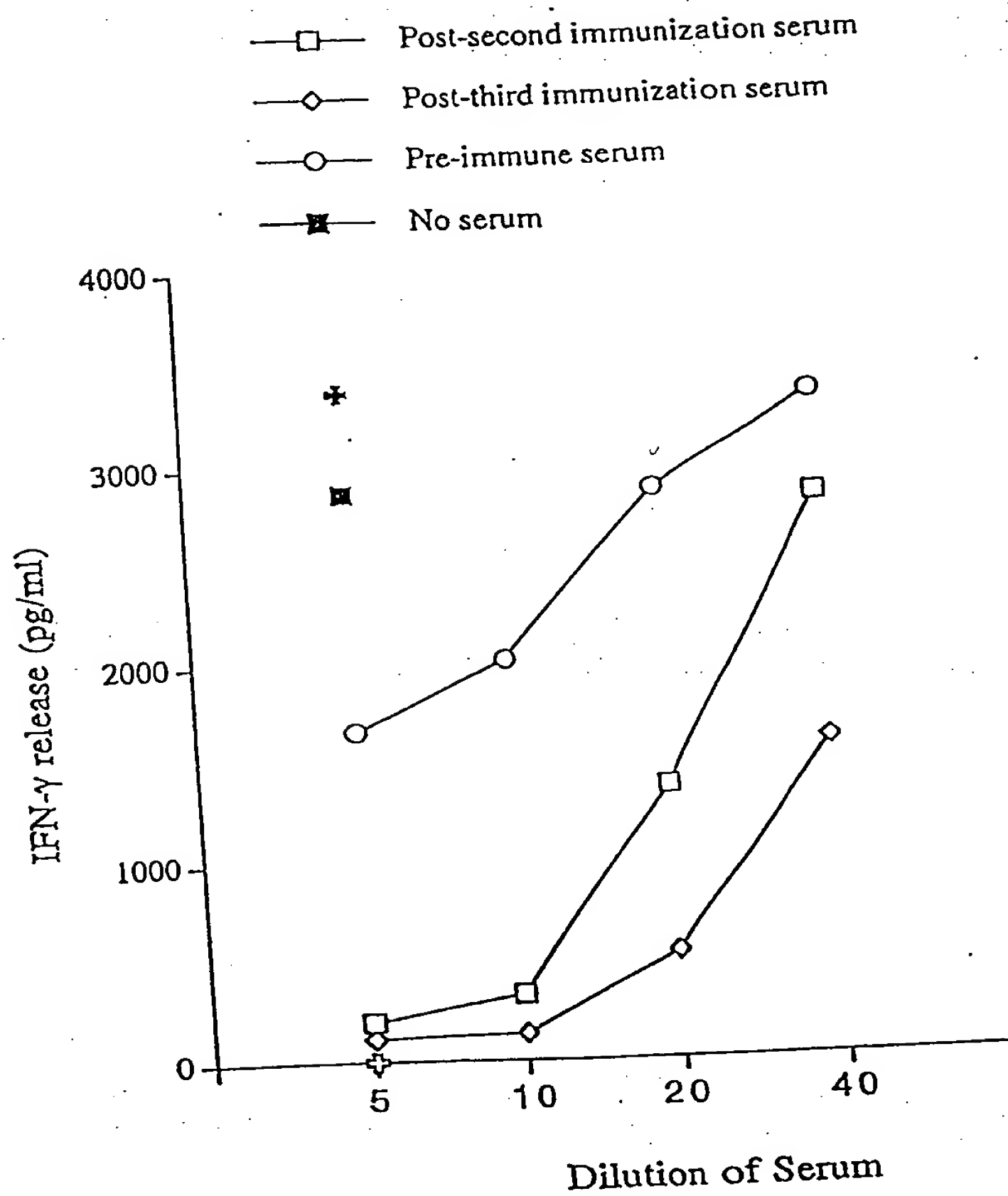


FIG. 2b

FIG. 3a

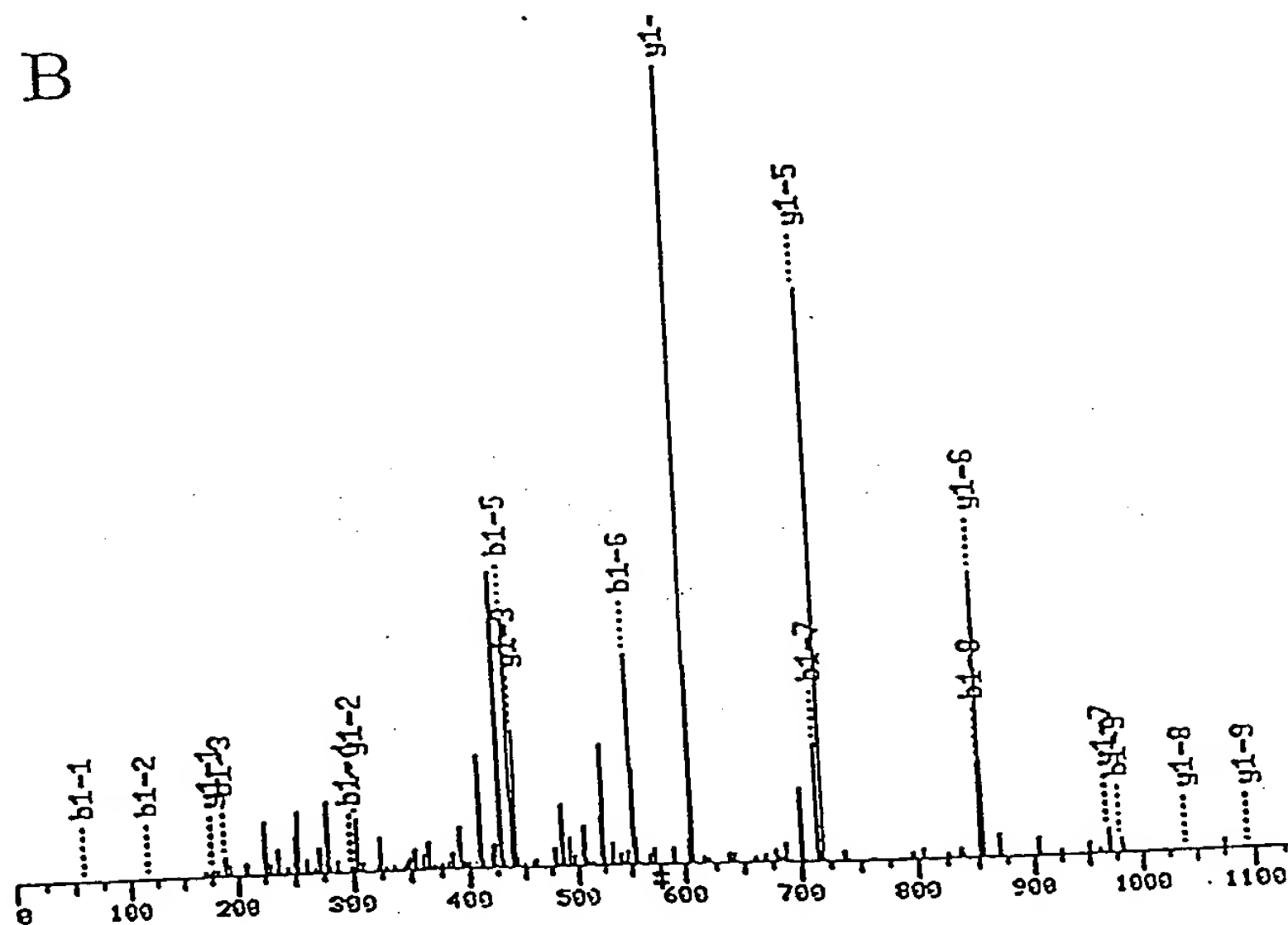


FIG. 3b

Position	MH+	Sequence
509-518	955.0122	SGFSLGSDGK (Seq 10 M:54)
328-337	973.1753	GIALDPAMGK (Seq 10 NO:55)
460-469	1152.3010	GGALHIYHQR (Seq 10 NO:56)
338-348	1315.5116	VFFTDYGQIPK (Seq 10 NO:57)

FIG. 3c

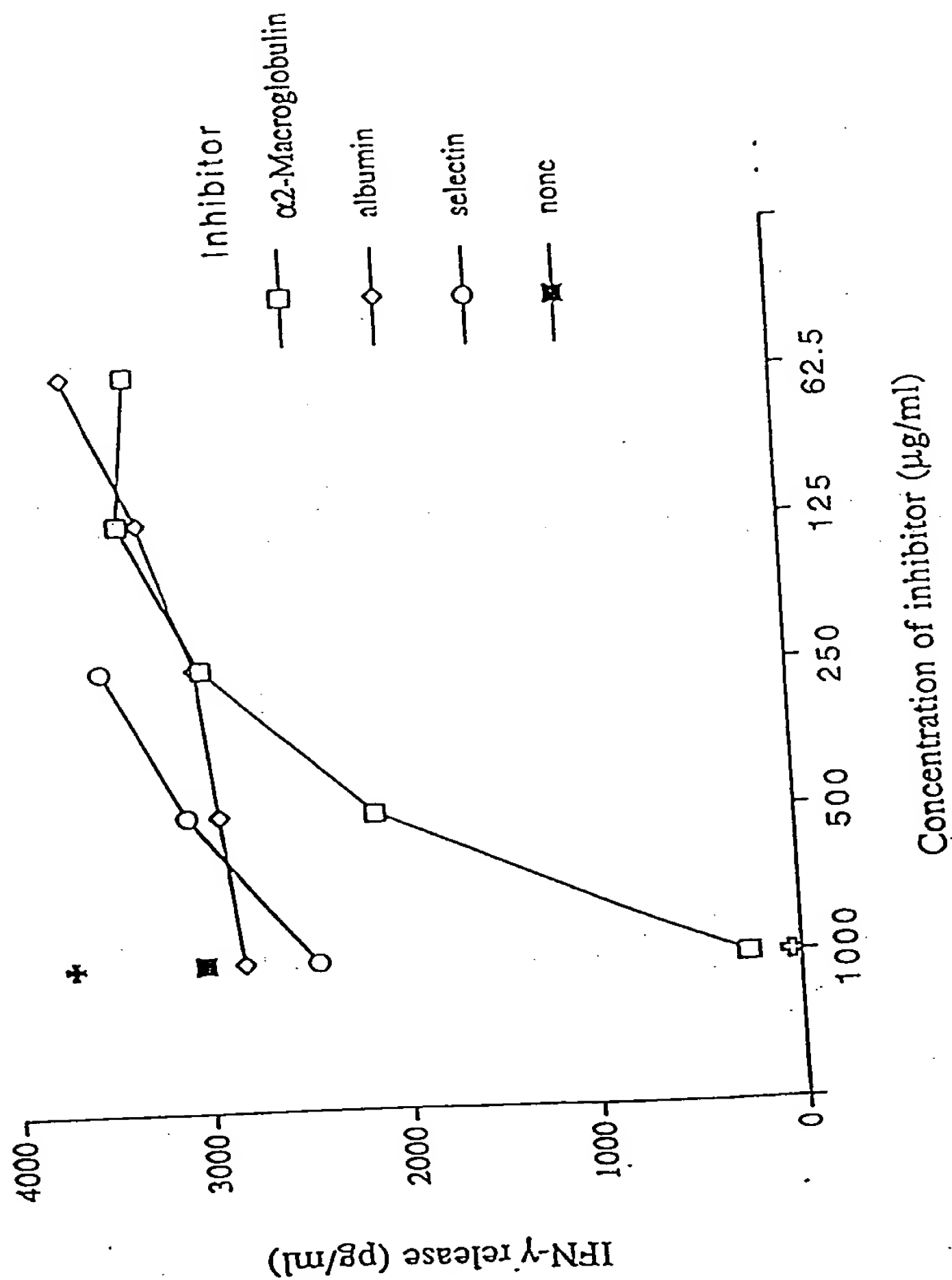


FIG. 4

Table 1. Specific binding of HSPs and α_2 -macroglobulin to primary cultures and cell lines of several histological origins*

Cells	Cell type	Haplotype	**% cells binding with FITC-labeled:				
			α_2 M	gp96	hsp70	hsp90	SA
B16	Melanoma	<i>b</i>	0.1	3.5	6.4	8.0	0.3
CT26	Carcinoma	<i>d</i>	N/D	0.3	3.1	5.5	0.4
YAC-1	Lymphoma	<i>b</i>	0.1	3.1	23.0	5.0	0.2
EL4	T cell thymoma	<i>b</i>	0.1	2.9	3.0	6.6	1.0
Meth A	Sarcoma	<i>d</i>	0.1	0.1	1.5	0.9	0.5
PS-C3H	Fibrosarcoma	<i>k</i>	0.1	0.1	2.0	0.3	0.3
UV6139	Sarcoma	<i>k</i>	11	0.0	0.7	0.2	1.5
P815	Mastocytoma	<i>d</i>	0.1	1.1	1.7	0.7	0.2
Peritoneal cells	Macrophage	<i>d</i>	90	97	82	82	11
BM-DCs	Dendritic cells	<i>b</i> and <i>d</i>	+++ [#]	+++	+++	+++	-
RAW264.7 ⁺	Macrophage	<i>d</i>	76	82	85	90	8.0
RAW309Cr.1 ⁺	Macrophage	<i>b</i> x <i>d</i>	0.1	0.1	0.1	0.1	0.1

FIG. 5

gp96

hsp70

hsp90

SA

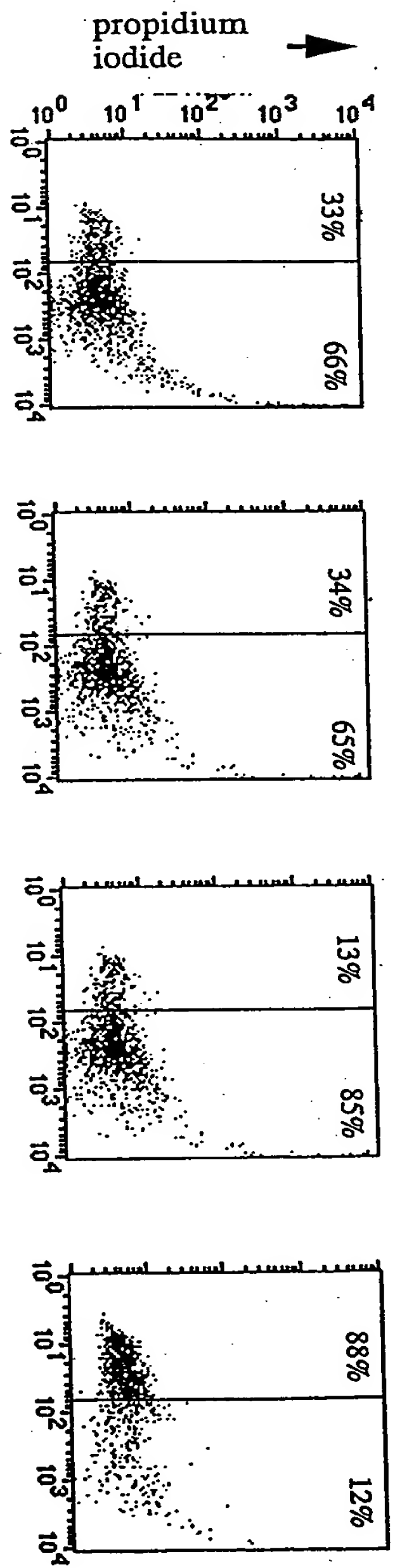


FIG. 6A

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FTIC →

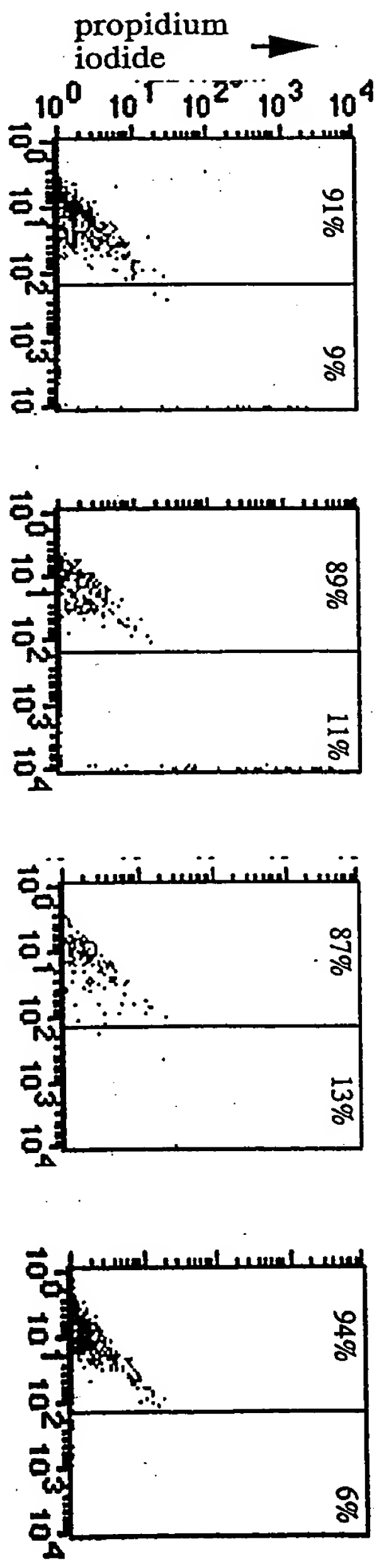


FIG. 6B

0370576 112300

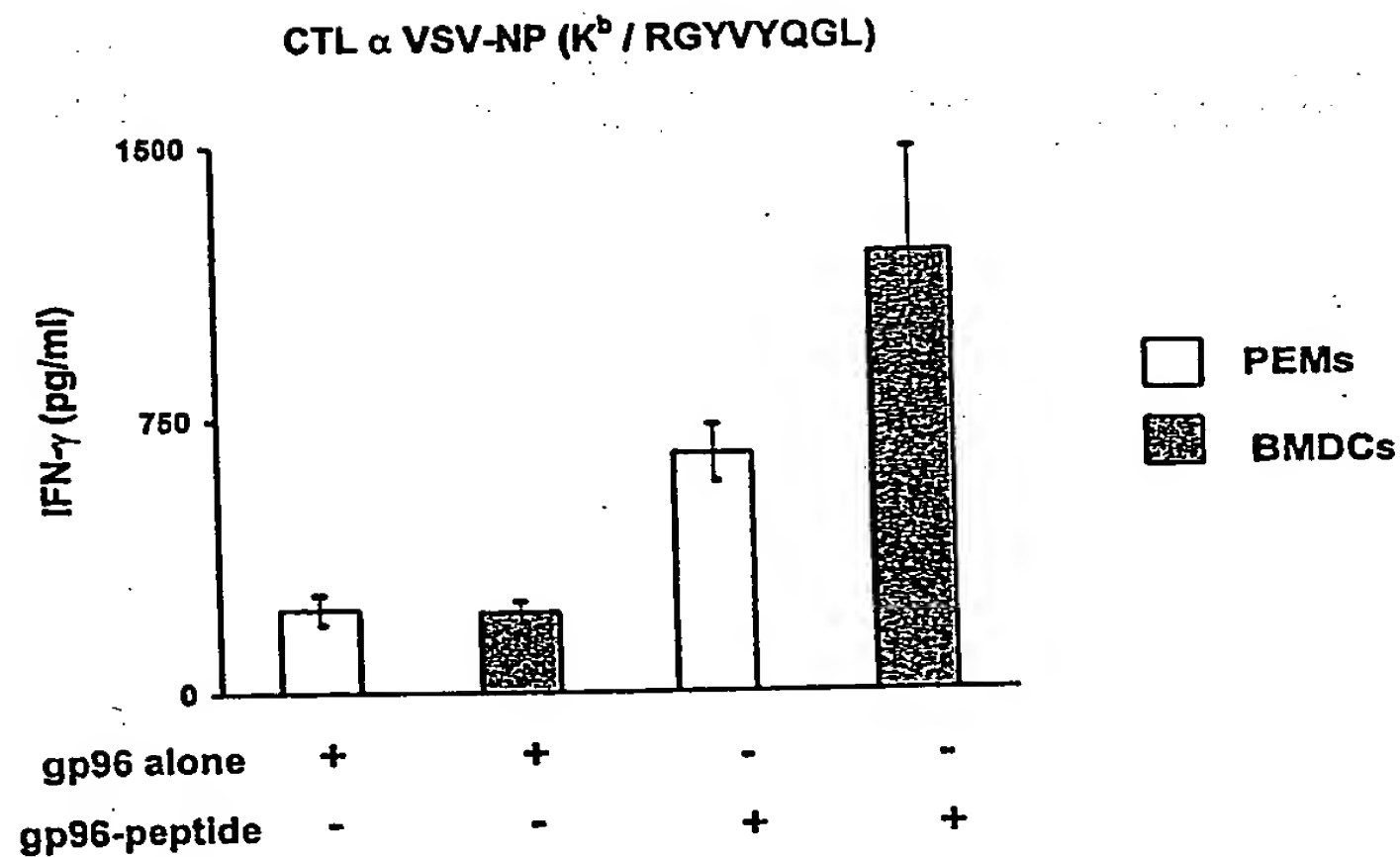


FIG. 7A

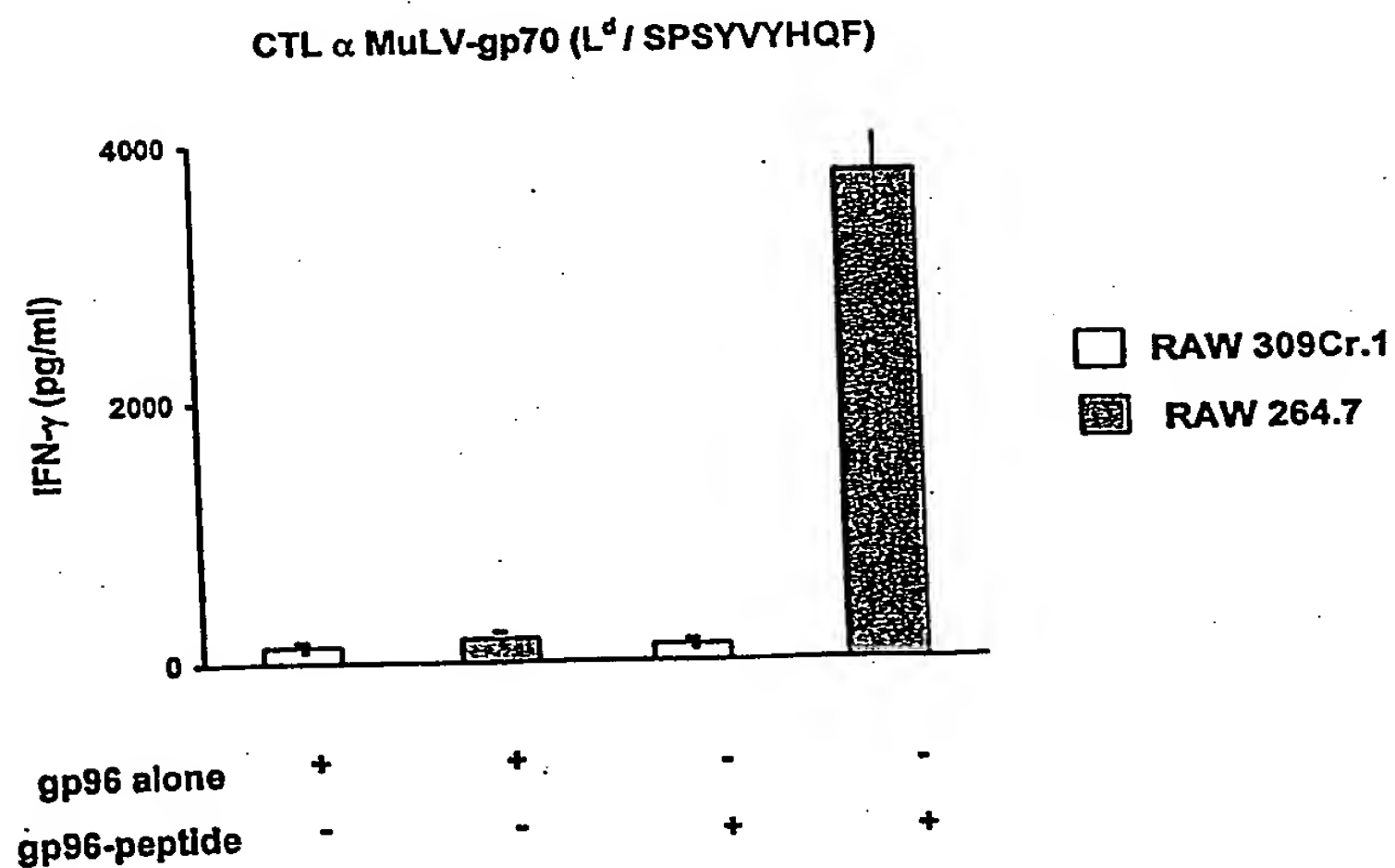


FIG. 7B

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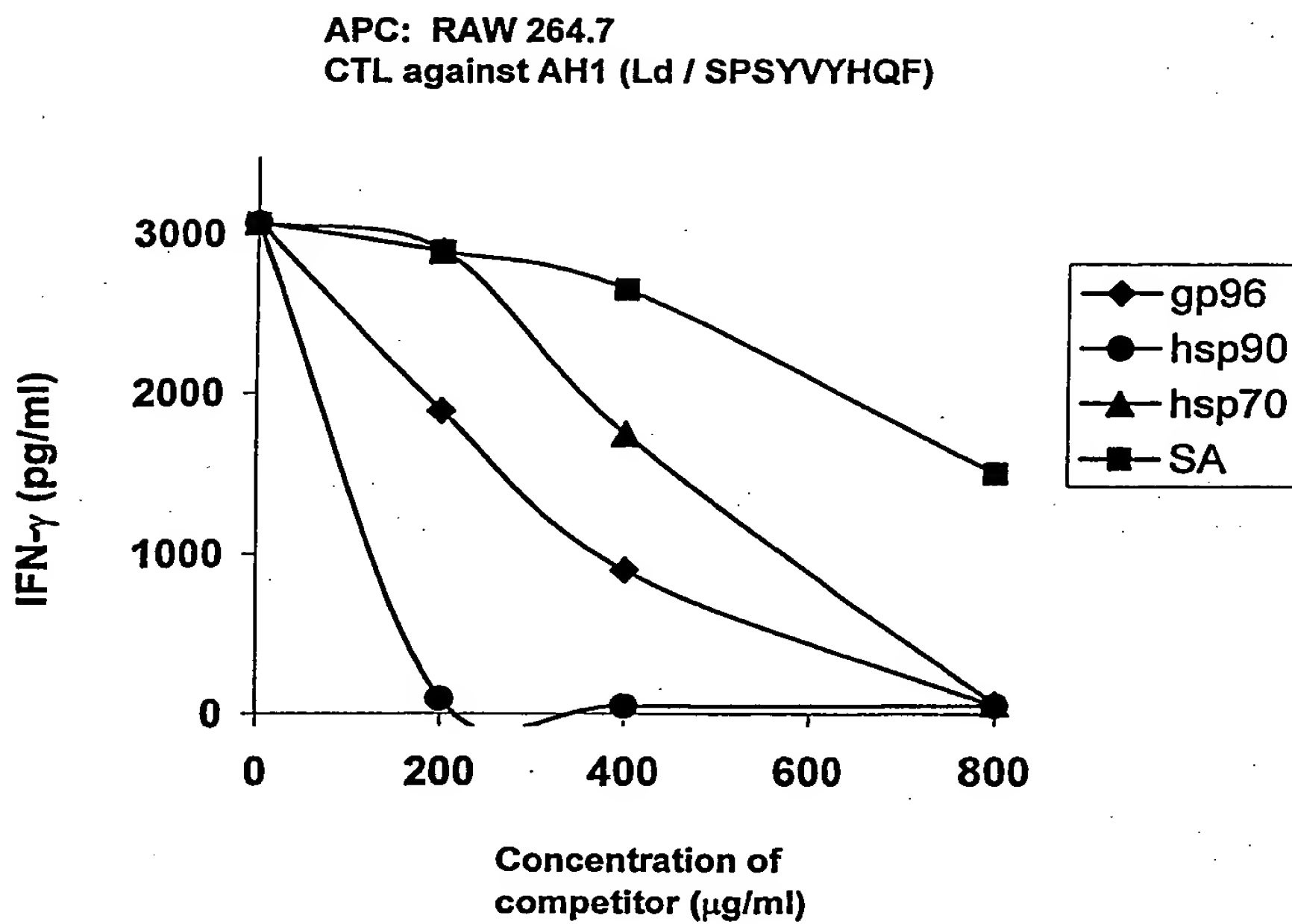


FIG. 9A

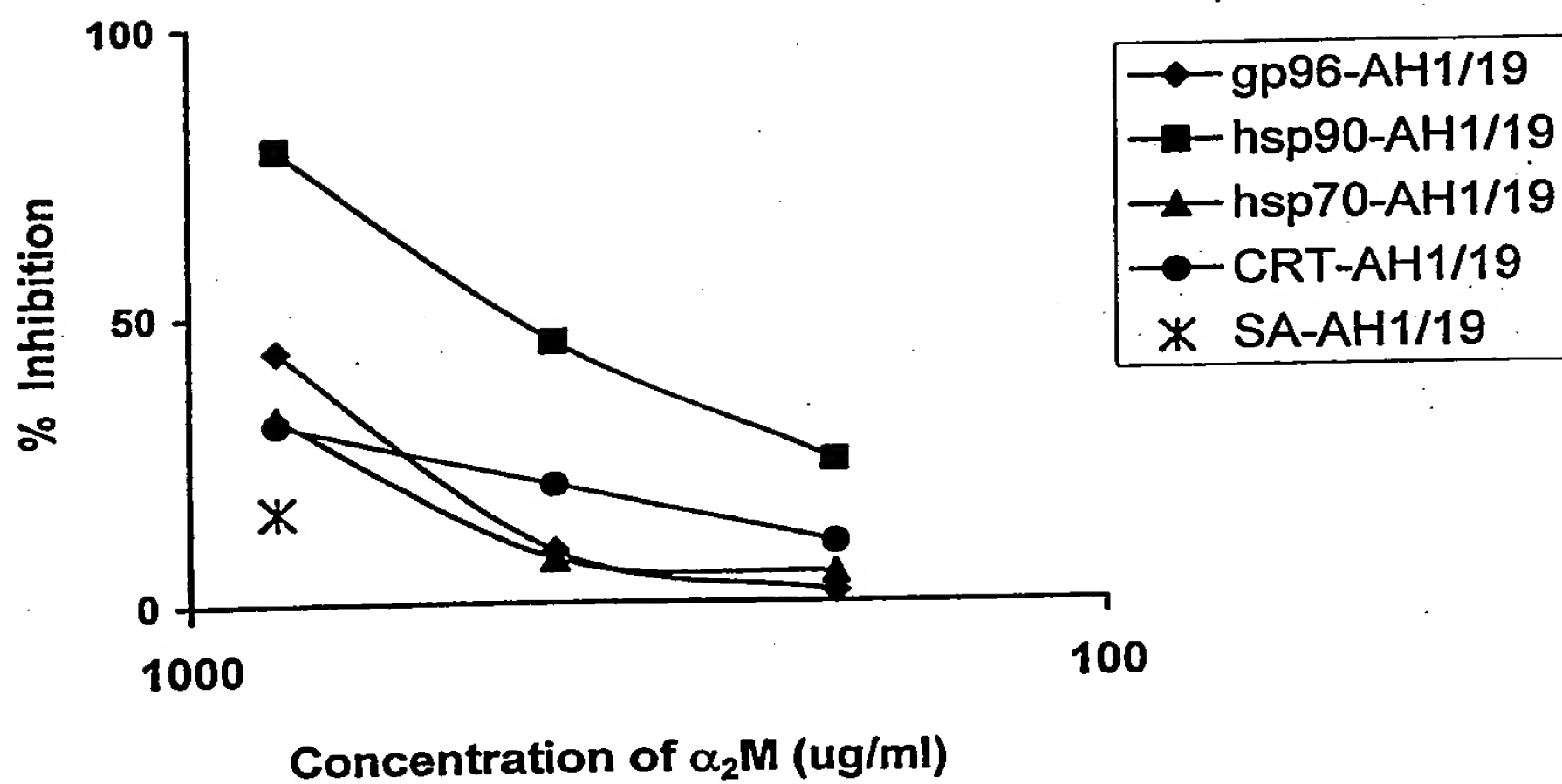


FIG. 9B

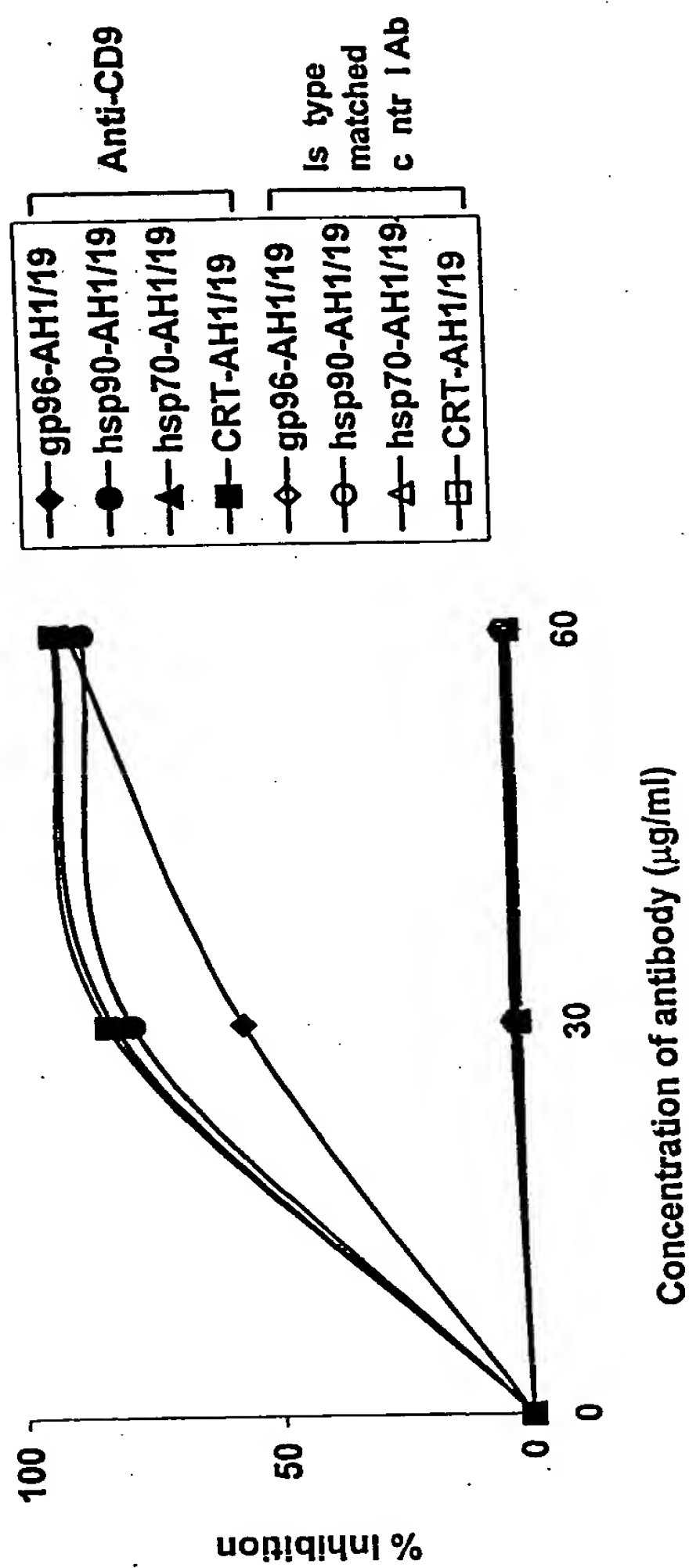


FIG. 9C

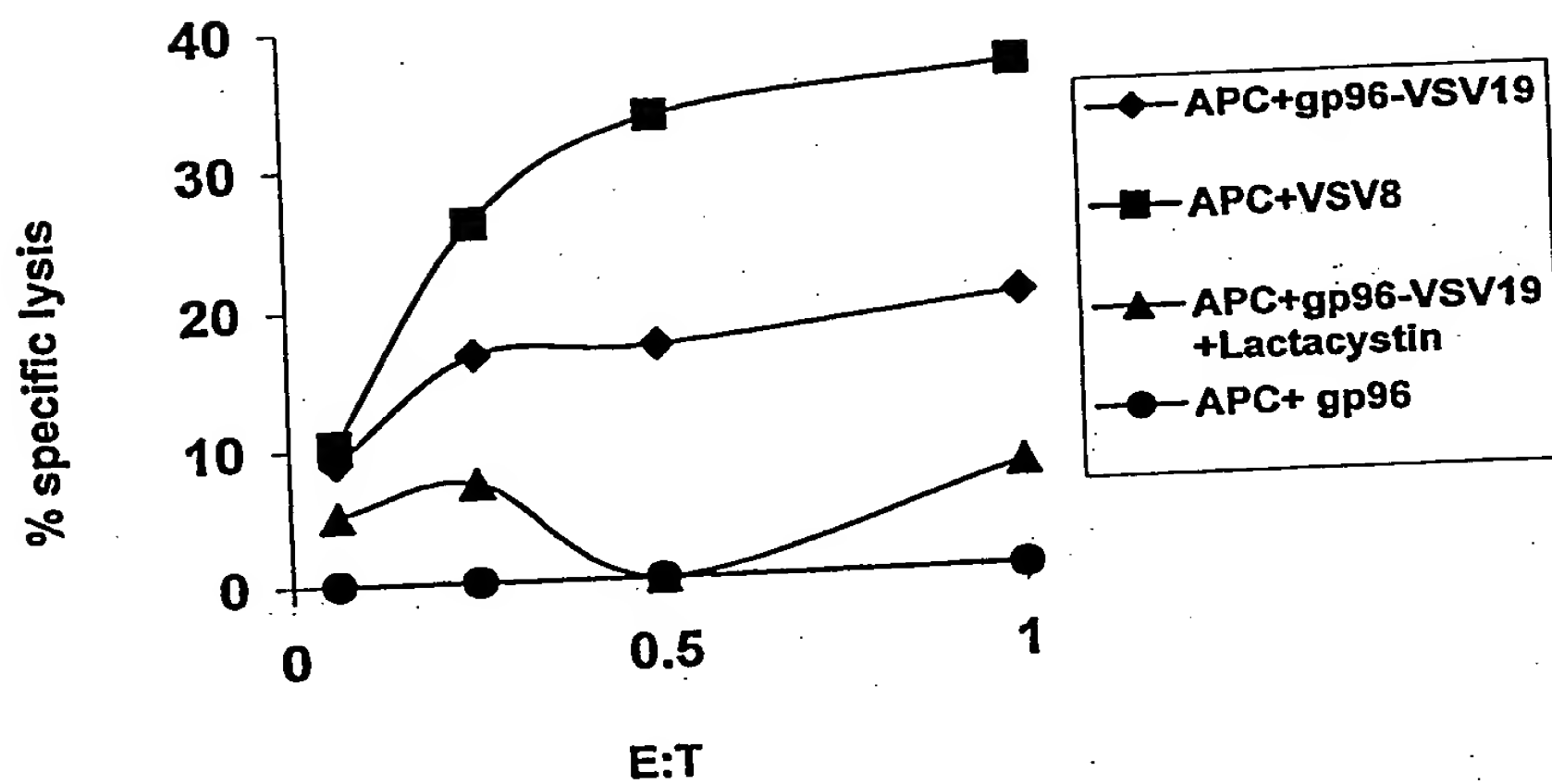


FIG. 10A

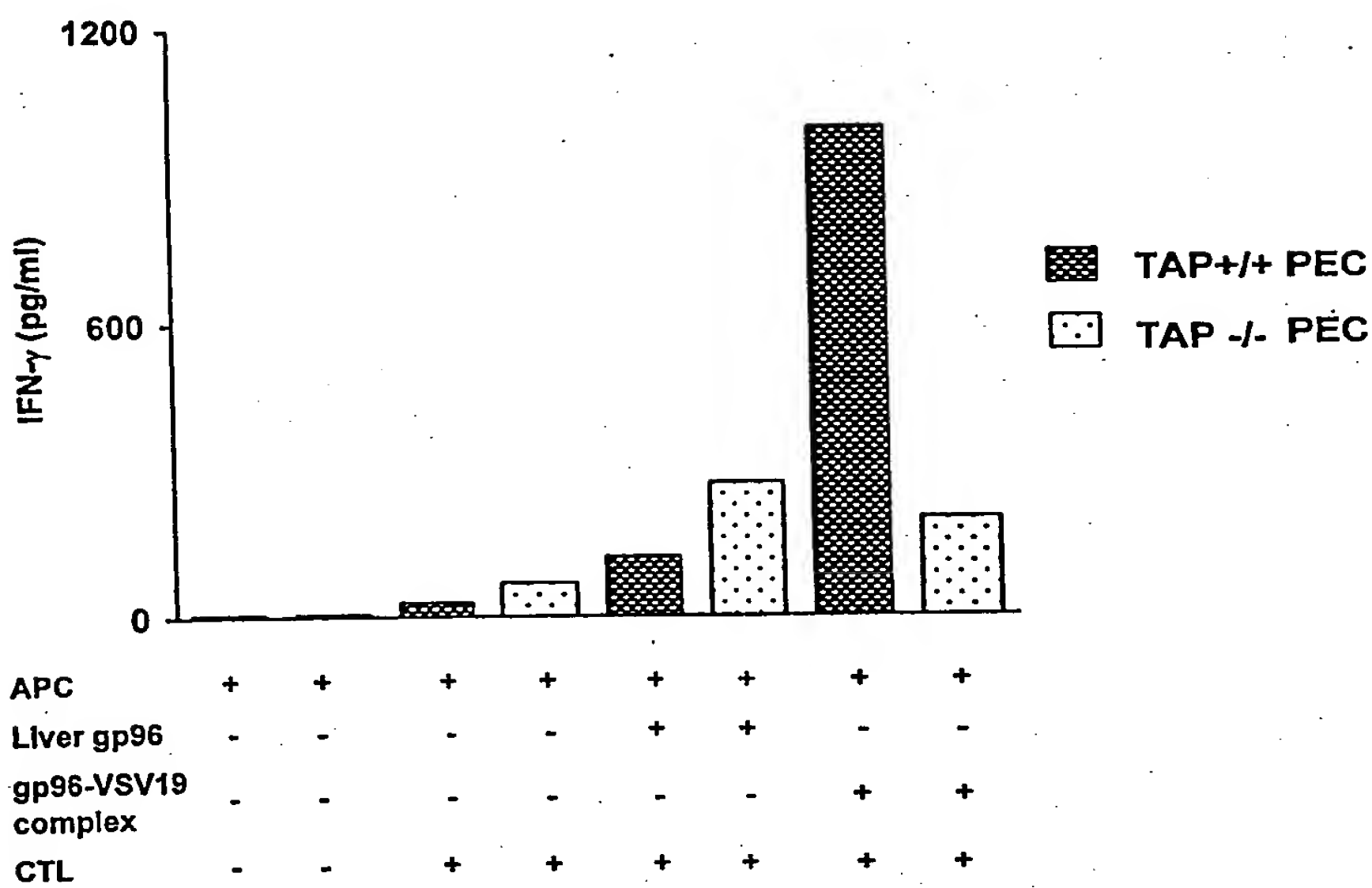


FIG. 10B

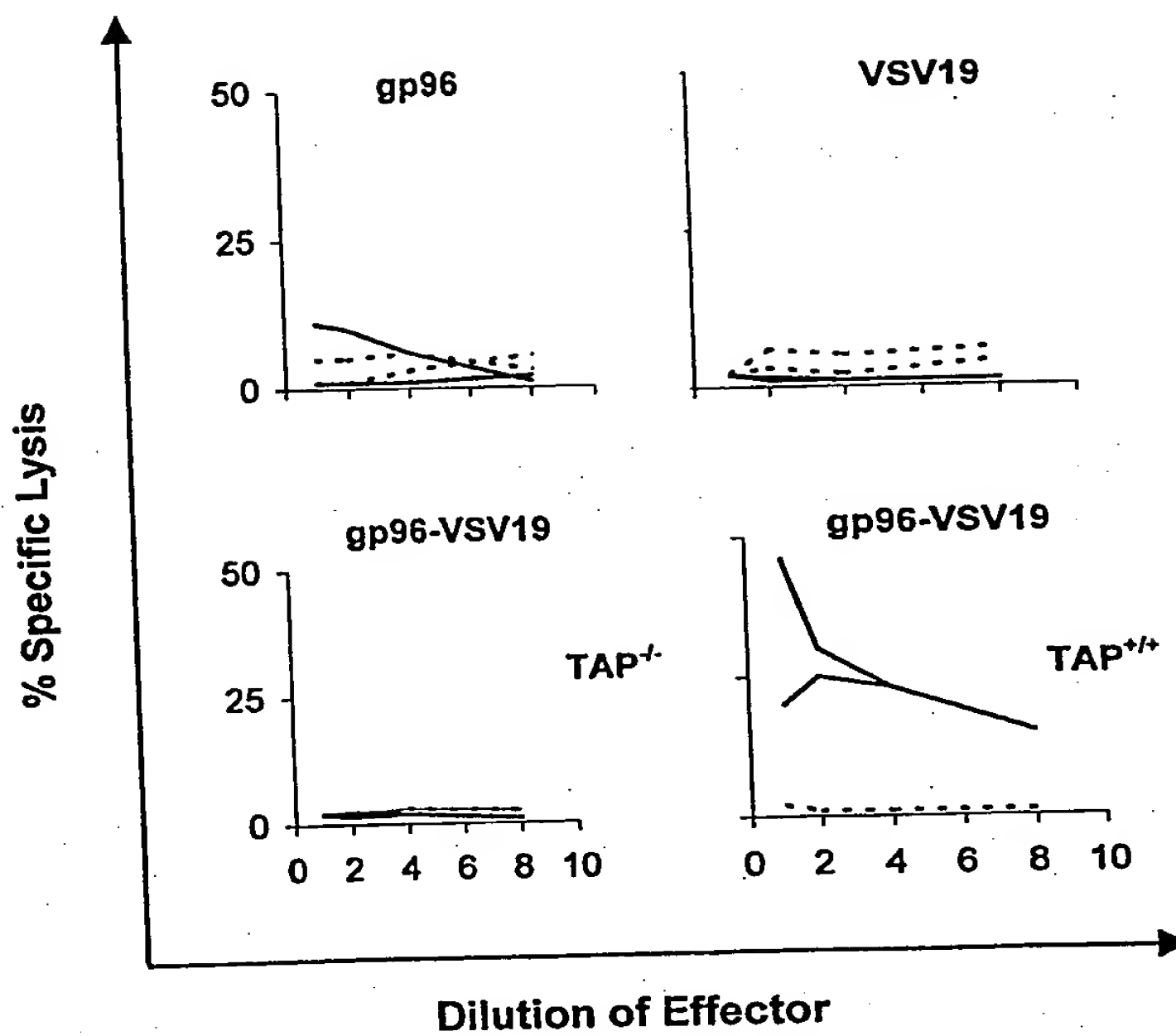


FIG. 10C

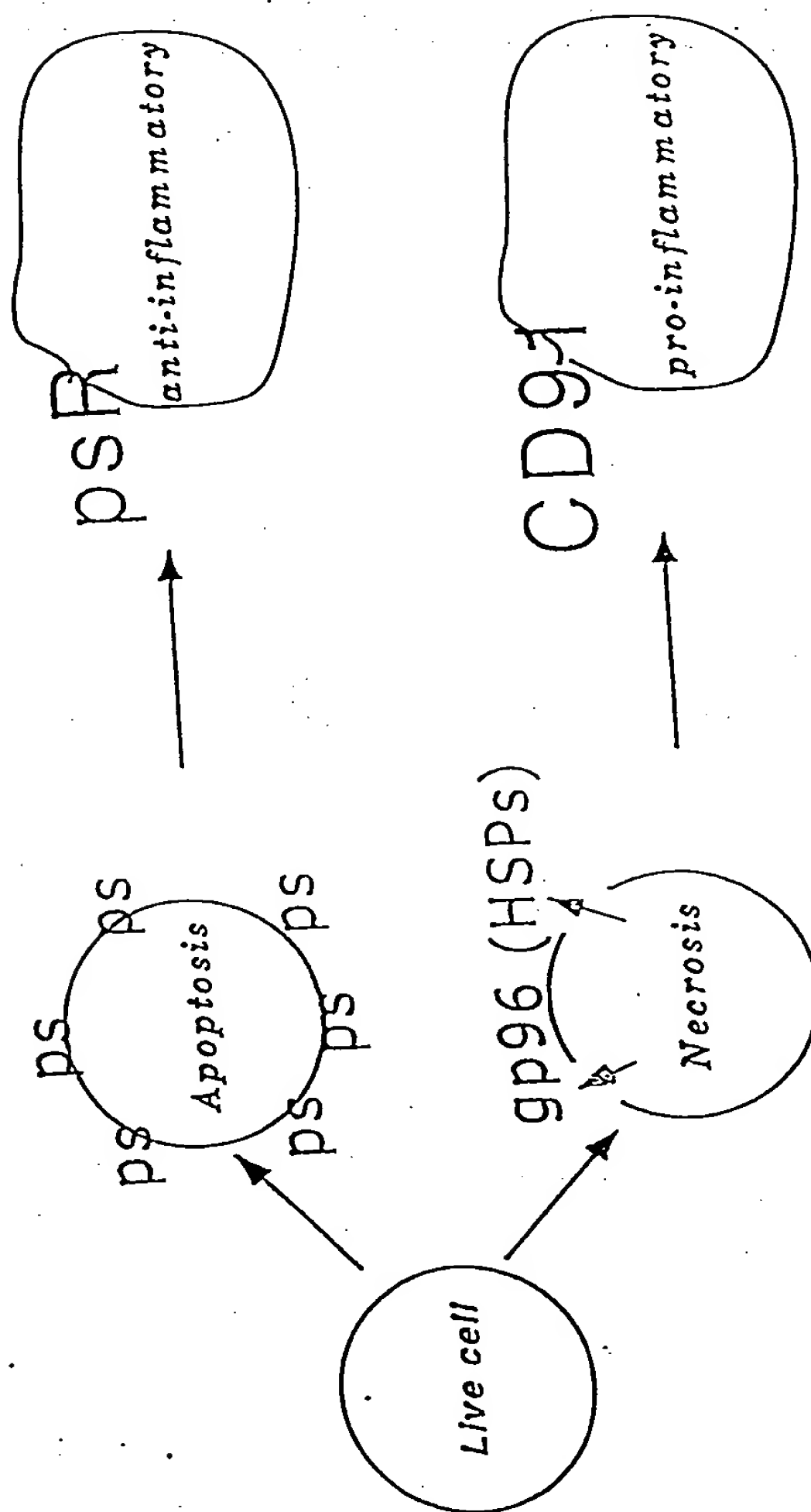


FIG. 11

CGCTGCTCCC	CGCCAGTGCA	CTGAGGAGGC	GGAAACGGGG	GAGCCCCTAG	TGCTCCATCA	60
GGCCCCTACC	AAGGCACCCC	CATCGGGTCC	ACGCCCCCCA	CCCCCACC	CGCCTCCTCC	120
CAATTGTGCA	TTTTTGCAGC	CGGAGTCGGC	TCCGAGATGG	GGCTGTGAGC	TTCGCCCTGG	180
GAGGGGGAGA	GGAGCGAGGA	GTAAAGCAGG	GGTGAAGGGT	TCGAATTTGG	GGGCAGGGGG	240
CGCACCCGCG	TCAGCAGGCC	CTTCCCAGGG	GGCTCGGAAC	TGTACCATT	CACCTATGCC	300
CCTGGTTCGC	TTTGCTTAAG	GAAGGATAAG	ATAGAAGAGT	CGGGGAGAGG	AAGATAAAGG	360
GGGACCCCCC	AATTGGGGGG	GGCGAGGACA	AGAAGTAACA	GGACCAGAGG	GTGGGGGCTG	420
CTGTTTGCAT	CGGCCACAC	C ATG CTG ACC CCG CCG	TTG CTG CTG CTC GTG			471
		Met Leu Thr Pro Pro	Leu Leu Leu Leu Val			
		1	5		10	
CCG CTG CTT	TCA GCT CTG	GTC TCC GGG	GCC ACT ATG	GAT GCC CCT	AAA	519
Pro Leu Leu	Ser Ala Leu	Val Ser Gly	Ala Thr Met	Asp Ala Pro	Lys	
	15		20		25	
ACT TGC AGC	CCT AAG CAG	TTT GCC TGC	AGA GAC CAA	ATC ACC TGT	ATC	567
Thr Cys Ser	Pro Lys Gln	Phe Ala Cys	Arg Asp Gln	Ile Thr Cys	Ile	
	30		35		40	
TCA AAG GGC	TGG CGG TGT	GAC GGT GAA	AGA GAT TGC	CCC GAC GGC	TCT	615
Ser Lys Gly	Trp Arg Cys	Asp Gly Glu	Arg Asp Cys	Pro Asp Gly	Ser	
	45		50		55	
GAT GAA GCC	CCT GAG ATC	TGT CCA CAG	AGT AAA GCC	CAG AGA TGC	CCG	663
Asp Glu Ala	Pro Glu Ile	Cys Pro Gln	Ser Lys Ala	Gln Arg Cys	Pro	
	60		65		70	
CCA AAT GAG	CAC AGT TGT	CTG GGG ACT	GAG CTA TGT	GTC CCC ATG	TCT	711
Pro Asn Glu	His Ser Cys	Leu Gly Thr	Glu Leu Cys	Val Pro Met	Ser	
	75		80		85	
CGT CTC TGC	AAC GGG ATC	CAG GAC TGC	ATG GAT GGC	TCA GAC GAG	GGT	759
Arg Leu Cys	Asn Gly Ile	Gln Asp Cys	Met Asp Gly	Ser Asp Glu	Gly	
	95		100		105	
GCT CAC TGC	CGA GAG CTC	CGA GCC AAC	TGT TCT CGA	ATG GGT TGT	CAA	807
Ala His Cys	Arg Glu Leu	Arg Ala Asn	Cys Ser Arg	Met Gly Cys	Gln	
	110		115		120	
CAC CAT TGT	GTA CCT ACA	CCC AGT GGG	CCC ACG TGC	TAC TGT AAC	AGC	855
His His Cys	Val Pro Thr	Pro Ser Gly	Pro Thr Cys	Tyr Cys Asn	Ser	
	125		130		135	
AGC TTC CAG	CTC GAG GCA	GAT GGC AAG	ACG TGC AAA	GAT TTT GAC	GAG	903
Ser Phe Gln	Leu Glu Ala	Asp Gly Lys	Thr Cys Lys	Asp Phe Asp	Glu	
	140		145		150	
TGT TCC GTG	TAT GGC ACC	TGC AGC CAG	CTT TGC ACC	AAC ACA GAT	GGC	951
Cys Ser Val	Tyr Gly Thr	Cys Ser Gln	Leu Cys Thr	Asn Thr Asp	Gly	
	155		160		165	
TCC TTC ACA	TGT GGC TGT	GTT GAA GGC	TAC CTG CTG	CAA CCG GAC	AAC	999
Ser Phe Thr	Cys Gly Cys	Val Glu Gly	Tyr Leu Leu	Gln Pro Asp	Asn	
	175		180		185	
CGC TCC TGC	AAG GCC AAG	AAT GAG CCA	GTA GAT CGG	CCG CCA GTG	CTA	1047
Arg Ser Cys	Lys Ala Lys	Asn Glu Pro	Val Asp Arg	Pro Pro Val	Leu	
	190		195		200	

FIG. 12A

CTG	ATT	GCC	AAC	TCT	CAG	AAC	ATC	CTA	GCT	ACG	TAC	CTG	AGT	GGG	GCC	1095
Leu	Ile	Ala	Asn	Ser	Gln	Asn	Ile	Leu	Ala	Thr	Tyr	Leu	Ser	Gly	Ala	
		205					210					215				
CAA	GTG	TCT	ACC	ATC	ACA	CCC	ACC	AGC	ACC	CGA	CAA	ACC	ACG	GCC	ATG	1143
Gln	Val	Ser	Thr	Ile	Thr	Pro	Thr	Ser	Thr	Arg	Gln	Thr	Thr	Ala	Met	
	220					225					230					
GAC	TTC	AGT	TAT	GCC	AAT	GAG	ACC	GTA	TGC	TGG	GTG	CAC	GTT	GGG	GAC	1191
Asp	Phe	Ser	Tyr	Ala	Asn	Glu	Thr	Val	Cys	Trp	Val	His	Val	Gly	Asp	
235					240					245					250	
AGT	GCT	GCC	CAG	ACA	CAG	CTC	AAG	TGT	GCC	CGG	ATG	CCT	GGC	CTG	AAG	1239
Ser	Ala	Ala	Gln	Thr	Gln	Leu	Lys	Cys	Ala	Arg	Met	Pro	Gly	Leu	Lys	
			255						260					265		
GGC	TTT	GTG	GAT	GAG	CAT	ACC	ATC	AAC	ATC	TCC	CTC	AGC	CTG	CAC	CAC	1287
Gly	Phe	Val	Asp	Glu	His	Thr	Ile	Asn	Ile	Ser	Leu	Ser	Leu	His	His	
		270						275					280			
GTG	GAG	CAG	ATG	GCA	ATC	GAC	TGG	CTG	ACG	GGA	AAC	TTC	TAC	TTT	GTC	1335
Val	Glu	Gln	Met	Ala	Ile	Asp	Trp	Leu	Thr	Gly	Asn	Phe	Tyr	Phe	Val	
	285						290					295				
GAC	GAC	ATT	GAC	GAC	AGG	ATC	TTT	GTC	TGT	AAC	CGA	AAC	GGG	GAC	ACC	1383
Asp	Asp	Ile	Asp	Asp	Arg	Ile	Phe	Val	Cys	Asn	Arg	Asn	Gly	Asp	Thr	
	300					305					310					
TGT	GTC	ACT	CTG	CTG	GAC	CTG	GAA	CTC	TAC	AAC	CCC	AAA	GGC	ATC	GCC	1431
Cys	Val	Thr	Leu	Leu	Asp	Leu	Glu	Leu	Tyr	Asn	Pro	Lys	Gly	Ile	Ala	
315					320					325					330	
TTG	GAC	CCC	GCC	ATG	GGG	AAG	GTG	TTC	TTC	ACT	GAC	TAC	GGG	CAG	ATC	1479
Leu	Asp	Pro	Ala	Met	Gly	Lys	Val	Phe	Phe	Thr	Asp	Tyr	Gly	Gln	Ile	
			335					340						345		
CCA	AAG	GTG	GAG	CGC	TGT	GAC	ATG	GAT	GGA	CAG	AAC	CGC	ACC	AAG	CTG	1527
Pro	Lys	Val	Glu	Arg	Cys	Asp	Met	Asp	Gly	Gln	Asn	Arg	Thr	Lys	Leu	
		350					355					360				
GTG	GAT	AGC	AAG	ATC	GTG	TTT	CCA	CAC	GGC	ATC	ACC	CTG	GAC	CTG	GTC	1575
Val	Asp	Ser	Lys	Ile	Val	Phe	Pro	His	Gly	Ile	Thr	Leu	Asp	Leu	Val	
	365					370						375				
AGC	CGC	CTC	GTC	TAC	TGG	GCG	GAC	GCC	TAC	CTA	GAC	TAC	ATC	GAG	GTG	1623
Ser	Arg	Leu	Val	Tyr	Trp	Ala	Asp	Ala	Tyr	Leu	Asp	Tyr	Ile	Glu	Val	
	380					385					390					
GTA	GAC	TAC	GAA	GGG	AAG	GGT	CGG	CAG	ACC	ATC	ATC	CAA	GGC	ATC	CTG	1671
Val	Asp	Tyr	Glu	Gly	Lys	Gly	Arg	Gln	Thr	Ile	Ile	Gln	Gly	Ile	Leu	
395					400					405					410	
ATC	GAG	CAC	CTG	TAC	GGC	CTG	ACC	GTG	TTT	GAG	AAC	TAT	CTC	TAC	GCC	1719
Ile	Glu	His	Leu	Tyr	Gly	Leu	Thr	Val	Phe	Glu	Asn	Tyr	Leu	Tyr	Ala	
			415					420					425			
ACC	AAC	TCG	GAC	AAT	GCC	AAC	ACG	CAG	CAG	AAG	ACG	AGC	GTG	ATC	CGA	1767
Thr	Asn	Ser	Asp	Asn	Ala	Asn	Thr	Gln	Gln	Lys	Thr	Ser	Val	Ile	Arg	
			430				435						440			

FIG. 12A

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GTG AAC CGG TTC AAC AGT ACT GAG TAC CAG GTC GTC ACC CGT GTG GAC Val Asn Arg Phe Asn Ser Thr Glu Tyr Gln Val Val Thr Arg Val Asp 445 450 455	1815
AAG GGT GGT GCC CTG CAT ATC TAC CAC CAG CGA CGC CAG CCC CGA GTG Lys Gly Gly Ala Leu His Ile Tyr His Gln Arg Arg Gln Pro Arg Val 460 465 470	1863
CGG AGT CAC GCC TGT GAG AAT GAC CAG TAC GGG AAG CCA GGT GGC TGC Arg Ser His Ala Cys Glu Asn Asp Gln Tyr Gly Lys Pro Gly Gly Cys 475 480 485 490	1911
TCC GAC ATC TGC CTC CTG GCC AAC AGT CAC AAG GCA AGG ACC TGC AGG Ser Asp Ile Cys Leu Leu Ala Asn Ser His Lys Ala Arg Thr Cys Arg 495 500 505	1959
TGC AGG TCT GGC TTC AGC CTG GGA AGT GAT GGG AAG TCT TGT AAG AAA Cys Arg Ser Gly Phe Ser Leu Gly Ser Asp Gly Lys Ser Cys Lys Lys 510 515 520	2007
CCT GAA CAT GAG CTG TTC CTC GTG TAT GGC AAG GGC CGA CCA GGC ATC Pro Glu His Glu Leu Phe Leu Val Tyr Gly Lys Gly Arg Pro Gly Ile 525 530 535	2055
ATT AGA GGC ATG GAC ATG GGG GCC AAG GTC CCA GAT GAG CAC ATG ATC Ile Arg Gly Met Asp Met Gly Ala Lys Val Pro Asp Glu His Met Ile 540 545 550	2103
CCC ATC GAG AAC CTT ATG AAT CCA CGC GCT CTG GAC TTC CAC GCC GAG Pro Ile Glu Asn Leu Met Asn Pro Arg Ala Leu Asp Phe His Ala Glu 555 560 565 570	2151
ACC GGC TTC ATC TAC TTT GCT GAC ACC ACC AGC TAC CTC ATT GGC CGC Thr Gly Phe Ile Tyr Phe Ala Asp Thr Thr Ser Tyr Leu Ile Gly Arg 575 580 585	2199
CAG AAA ATT GAT GGC ACG GAG AGA GAG ACT ATC CTG AAG GAT GGC ATC Gln Lys Ile Asp Gly Thr Glu Arg Glu Thr Ile Leu Lys Asp Gly Ile 590 595 600	2247
CAC AAT GTG GAG GGC GTA GCC GTG GAC TGG ATG GGA GAC AAT CTT TAC His Asn Val Glu Gly Val Ala Val Asp Trp Met Gly Asp Asn Leu Tyr 605 610 615	2295
TGG ACT GAT GAT GGC CCC AAG AAG ACC ATT AGT GTG GCC AGG CTG GAG Trp Thr Asp Asp Gly Pro Lys Lys Thr Ile Ser Val Ala Arg Leu Glu 620 625 630	2343
AAA GCC GCT CAG ACC CGG AAG ACT CTA ATT GAG GGC AAG ATG ACA CAC Lys Ala Ala Gln Thr Arg Lys Thr Leu Ile Glu Gly Lys Met Thr His 635 640 645 650	2391
CCC AGG GCC ATT GTA GTG GAT CCA CTC AAT GGG TGG ATG TAC TGG ACA Pro Arg Ala Ile Val Val Asp Pro Leu Asn Gly Trp Met Tyr Trp Thr 655 660 665	2439
GAC TGG GAG GAG GAC CCC AAG GAC AGT CGG CGA GGG CGG CTC GAG AGG Asp Trp Glu Glu Asp Pro Lys Asp Ser Arg Arg Gly Arg Leu Glu Arg 670 675 680	2487

FIG. 12A

GCT TGG ATG GAC GGC TCA CAC CGA GAT ATC TTT GTC ACC TCC AAG ACA	2535
Ala Trp Met Asp Gly Ser His Arg Asp Ile Phe Val Thr Ser Lys Thr	
685 690 695	
GTG CTT TGG CCC AAT GGG CTA AGC CTG GAT ATC CCA GCC GGA CGC CTC	2583
Val Leu Trp Pro Asn Gly Leu Ser Leu Asp Ile Pro Ala Gly Arg Leu	
700 705 710	
TAC TGG GTG GAT GCC TTC TAT GAC CGA ATT GAG ACC ATA CTG CTC AAT	2631
Tyr Trp Val Asp Ala Phe Tyr Asp Arg Ile Glu Thr Ile Leu Leu Asn	
715 720 725 730	
GGC ACA GAC CGG AAG ATT GTA TAT GAG GGT CCT GAA CTG AAT CAT GCC	2679
Gly Thr Asp Arg Lys Ile Val Tyr Glu Gly Pro Glu Leu Asn His Ala	
735 740 745	
TTC GGC CTG TGT CAC CAT GGC AAC TAC CTC TTT TGG ACC GAG TAC CGG	2727
Phe Gly Leu Cys His His Gly Asn Tyr Leu Phe Trp Thr Glu Tyr Arg	
750 755 760	
AGC GGC AGC GTC TAC CGC TTG GAA CGG GGC GTG GCA GGC GCA CCG CCC	2775
Ser Gly Ser Val Tyr Arg Leu Glu Arg Gly Val Ala Gly Ala Pro Pro	
765 770 775	
ACT GTG ACC CTT CTG CGC AGC GAG AGA CCG CCT ATC TTT GAG ATC CGA	2823
Thr Val Thr Leu Leu Arg Ser Glu Arg Pro Pro Ile Phe Glu Ile Arg	
780 785 790	
ATG TAC GAC GCG CAC GAG CAG CAA GTG GGT ACC AAC AAA TGC CGG GTA	2871
Met Tyr Asp Ala His Glu Gln Gln Val Gly Thr Asn Lys Cys Arg Val	
795 800 805 810	
AAT AAC GGA GGC TGC AGC AGC CTG TGC CTC GCC ACC CCC GGG AGC CGC	2919
Asn Asn Gly Gly Cys Ser Ser Leu Cys Leu Ala Thr Pro Gly Ser Arg	
815 820 825	
CAG TGT GCC TGT GCC GAG GAC CAG GTG TTG GAC ACA GAT GGT GTC ACC	2967
Gln Cys Ala Cys Ala Glu Asp Gln Val Leu Asp Thr Asp Gly Val Thr	
830 835 840	
TGC TTG GCG AAC CCA TCC TAC GTG CCC CCA CCC CAG TGC CAG CCG GGC	3015
Cys Leu Ala Asn Pro Ser Tyr Val Pro Pro Pro Gln Cys Gln Pro Gly	
845 850 855	
CAG TTT GCC TGT GCC AAC AAC CGC TGC ATC CAG GAG CGC TGG AAG TGT	3063
Gln Phe Ala Cys Ala Asn Asn Arg Cys Ile Gln Glu Arg Trp Lys Cys	
860 865 870	
GAC GGA GAC AAC GAC TGT CTG GAC AAC AGC GAT GAG GCC CCA GCA CTG	3111
Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp Glu Ala Pro Ala Leu	
875 880 885 890	
TGC CAT CAA CAC ACC TGT CCC TCG GAC CGA TTC AAG TGT GAG AAC AAC	3159
Cys His Gln His Thr Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn	
895 900 905	
CGG TGT ATC CCC AAC CGC TGG CTC TGT GAT GGG GAT AAT GAT TGT GGC	3207
Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly	
910 915 920	

FIG. 12A

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AAC	AGC	GAG	GAC	GAA	TCC	AAT	GCC	ACG	TGC	TCA	GCC	CGC	ACC	TGT	CCA	3255
Asn	Ser	Glu	Asp	Glu	Ser	Asn	Ala	Thr	Cys	Ser	Ala	Arg	Thr	Cys	Pro	
		925					930					935				
CCC	AAC	CAG	TTC	TCC	TGT	GCC	AGT	GGC	CGA	TGC	ATT	CCT	ATC	TCA	TGG	3303
Pro	Asn	Gln	Phe	Ser	Cys	Ala	Ser	Gly	Arg	Cys	Ile	Pro	Ile	Ser	Trp	
	940					945					950					
ACC	TGT	GAT	CTG	GAT	GAT	GAC	TGT	GGG	GAC	CGG	TCC	GAT	GAG	TCA	GCC	3351
Thr	Cys	Asp	Leu	Asp	Asp	Asp	Cys	Gly	Asp	Arg	Ser	Asp	Glu	Ser	Ala	
955					960					965					970	
TCA	TGC	GCC	TAC	CCC	ACC	TGC	TTC	CCC	CTG	ACT	CAA	TTT	ACC	TGC	AAC	3399
Ser	Cys	Ala	Tyr	Pro	Thr	Cys	Phe	Pro	Leu	Thr	Gln	Phe	Thr	Cys	Asn	
				975					980					985		
AAT	GGC	AGA	TGT	ATT	AAC	ATC	AAC	TGG	CGG	TGT	GAC	AAC	GAC	AAT	GAC	3447
Asn	Gly	Arg	Cys	Ile	Asn	Ile	Asn	Trp	Arg	Cys	Asp	Asn	Asp	Asn	Asp	
			990					995					1000			
TGT	GGG	GAC	AAC	AGC	GAC	GAA	GCC	GGC	TGC	AGT	CAC	TCC	TGC	TCC	AGT	3495
Cys	Gly	Asp	Asn	Ser	Asp	Glu	Ala	Gly	Cys	Ser	His	Ser	Cys	Ser	Ser	
	1005					1010						1015				
ACC	CAG	TTC	AAG	TGC	AAC	AGT	GGC	AGA	TGC	ATC	CCC	GAG	CAC	TGG	ACG	3543
Thr	Gln	Phe	Lys	Cys	Asn	Ser	Gly	Arg	Cys	Ile	Pro	Glu	His	Trp	Thr	
	1020					1025					1030					
TGT	GAT	GGG	GAC	AAT	GAT	TGT	GGG	GAC	TAC	AGC	GAC	GAG	ACA	CAC	GCC	3591
Cys	Asp	Gly	Asp	Asn	Asp	Cys	Gly	Asp	Tyr	Ser	Asp	Glu	Thr	His	Ala	
1035					1040				1045						1050	
AAC	TGT	ACC	AAC	CAG	GCT	ACA	AGA	CCT	CCT	GGT	GGC	TGC	CAC	TCG	GAT	3639
Asn	Cys	Thr	Asn	Gln	Ala	Thr	Arg	Pro	Pro	Gly	Gly	Cys	His	Ser	Asp	
				1055				1060						1065		
GAG	TTC	CAG	TGC	CCG	CTA	GAT	GGC	CTG	TGC	ATC	CCC	CTG	AGG	TGG	CGC	3687
Glu	Phe	Gln	Cys	Pro	Leu	Asp	Gly	Leu	Cys	Ile	Pro	Leu	Arg	Trp	Arg	
		1070					1075					1080				
TGC	GAC	GGG	GAC	ACC	GAC	TGC	ATG	GAT	TCC	AGC	GAT	GAG	AAG	AGC	TGT	3735
Cys	Asp	Gly	Asp	Thr	Asp	Cys	Met	Asp	Ser	Ser	Asp	Glu	Lys	Ser	Cys	
		1085				1090						1095				
GAG	GGC	GTG	ACC	CAT	GTT	TGT	GAC	CCG	AAT	GTC	AAG	TTT	GGC	TGC	AAG	3783
Glu	Gly	Val	Thr	His	Val	Cys	Asp	Pro	Asn	Val	Lys	Phe	Gly	Cys	Lys	
	1100					1105					1110					
GAC	TCC	GCC	CGG	TGC	ATC	AGC	AAG	GCG	TGG	GTG	TGT	GAT	GGC	GAC	AGC	3831
Asp	Ser	Ala	Arg	Cys	Ile	Ser	Lys	Ala	Trp	Val	Cys	Asp	Gly	Asp	Ser	
1115					1120				1125					1130		
GAC	TGT	GAA	GAT	AAC	TCC	GAC	GAG	GAG	AAC	TGT	GAG	GCC	CTG	GCC	TGC	3879
Asp	Cys	Glu	Asp	Asn	Ser	Asp	Glu	Glu	Asn	Cys	Glu	Ala	Leu	Ala	Cys	
				1135				1140					1145			
AGG	CCA	CCC	TCC	CAT	CCC	TGC	GCC	AAC	AAC	ACC	TCT	GTC	TGC	CTG	CCT	3927
Arg	Pro	Pro	Ser	His	Pro	Cys	Ala	Asn	Asn	Thr	Ser	Val	Cys	Leu	Pro	
			1150				1155						1160			

FIG. 12A

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CCT GAC AAG CTG TGC GAC GGC AAG GAT GAC TGT GGA GAC GGC TCG GAT Pro Asp Lys Leu Cys Asp Gly Lys Asp Asp Cys Gly Asp Gly Ser Asp 1165 1170 1175	3975
GAG GGC GAG CTC TGT GAC CAG TGT TCT CTG AAT AAT GGT GGC TGT AGT Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu Asn Asn Gly Gly Cys Ser 1180 1185 1190	4023
CAC AAC TGC TCA GTG GCC CCT GGT GAA GGC ATC GTG TGC TCT TGC CCT His Asn Cys Ser Val Ala Pro Gly Glu Gly Ile Val Cys Ser Cys Pro 1195 1200 1205 1210	4071
CTG GGC ATG GAG CTG GGC TCT GAC AAC CAC ACC TGC CAG ATC CAG AGC Leu Gly Met Glu Leu Gly Ser Asp Asn His Thr Cys Gln Ile Gln Ser 1215 1220 1225	4119
TAC TGT GCC AAG CAC CTC AAA TGC AGC CAG AAG TGT GAC CAG AAC AAG Tyr Cys Ala Lys His Leu Lys Cys Ser Gln Lys Cys Asp Gln Asn Lys 1230 1235 1240	4167
TTC AGT GTG AAG TGC TCC TGC TAC GAG GGC TGG GTC TTG GAG CCT GAC Phe Ser Val Lys Cys Ser Cys Tyr Glu Gly Trp Val Leu Glu Pro Asp 1245 1250 1255	4215
GGG GAA ACG TGC CGC AGT CTG GAT CCC TTC AAA CTG TTC ATC ATC TTC Gly Glu Thr Cys Arg Ser Leu Asp Pro Phe Lys Leu Phe Ile Ile Phe 1260 1265 1270	4263
TCC AAC CGC CAC GAG ATC AGG CGC ATT GAC CTT CAC AAG GGG GAC TAC Ser Asn Arg His Glu Ile Arg Arg Ile Asp Leu His Lys Gly Asp Tyr 1275 1280 1285 1290	4311
AGC GTC CTA GTG CCT GGC CTG CGC AAC ACT ATT GCC CTG GAC TTC CAC Ser Val Leu Val Pro Gly Leu Arg Asn Thr Ile Ala Leu Asp Phe His 1295 1300 1305	4359
CTC AGC CAG AGT GCC CTC TAC TGG ACC GAC GCG GTA GAG GAC AAG ATC Leu Ser Gln Ser Ala Leu Tyr Trp Thr Asp Ala Val Glu Asp Lys Ile 1310 1315 1320	4407
TAC CGT GGG AAA CTC CTG GAC AAC GGA GCC CTG ACC AGC TTT GAG GTG Tyr Arg Gly Lys Leu Leu Asp Asn Gly Ala Leu Thr Ser Phe Glu Val 1325 1330 1335	4455
GTG ATT CAG TAT GGC TTG GCC ACA CCA GAG GGC CTG GCT GTA GAT TGG Val Ile Gln Tyr Gly Leu Ala Thr Pro Glu Gly Leu Ala Val Asp Trp 1340 1345 1350	4503
ATT GCA GGC AAC ATC TAC TGG GTG GAG AGC AAC CTG GAC CAG ATC GAA Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser Asn Leu Asp Gln Ile Glu 1355 1360 1365 1370	4551
GTG GCC AAG CTG GAC GGA ACC CTC CGA ACC ACT CTG CTG GCG GGT GAC Val Ala Lys Leu Asp Gly Thr Leu Arg Thr Thr Leu Leu Ala Gly Asp 1375 1380 1385	4599
ATT GAG CAC CCG AGG GCC ATC GCT CTG GAC CCT CGG GAT GGG ATT CTG Ile Glu His Pro Arg Ala Ile Ala Leu Asp Pro Arg Asp Gly Ile Leu 1390 1395 1400	4647

FIG. 12A

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(Sh et 27 of 91)

TTT TGG ACA GAC TGG GAT GCC AGC CTG CCA CGA ATC GAG GCT GCA TCC Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro Arg Ile Glu Ala Ala Ser 1405 1410 1415	4695
ATG AGT GGA GCT GGC CGC CGA ACC ATC CAC CGG GAG ACA GGC TCT GGG Met Ser Gly Ala Gly Arg Arg Thr Ile His Arg Glu Thr Gly Ser Gly 1420 1425 1430	4743
GGC TGC GCC AAT GGG CTC ACC GTG GAT TAC CTG GAG AAG CGC ATC CTC Gly Cys Ala Asn Gly Leu Thr Val Asp Tyr Leu Glu Lys Arg Ile Leu 1435 1440 1445 1450	4791
TGG ATT GAT GCT AGG TCA GAT GCC ATC TAT TCA GCC CGG TAT GAC GGC Trp Ile Asp Ala Arg Ser Asp Ala Ile Tyr Ser Ala Arg Tyr Asp Gly 1455 1460 1465	4839
TCC GGC CAC ATG GAG GTG CTT CGG GGA CAC GAG TTC CTG TCA CAC CCA Ser Gly His Met Glu Val Leu Arg Gly His Glu Phe Leu Ser His Pro 1470 1475 1480	4887
TTT GCC GTG ACA CTG TAC GGT GGG GAG GTG TAC TGG ACC GAC TGG CGA Phe Ala Val Thr Leu Tyr Gly Gly Glu Val Tyr Trp Thr Asp Trp Arg 1485 1490 1495	4935
ACA AAT ACA CTG GCT AAG GCC AAC AAG TGG ACT GGC CAC AAC GTC ACC Thr Asn Thr Leu Ala Lys Ala Asn Lys Trp Thr Gly His Asn Val Thr 1500 1505 1510	4983
GTG GTA CAG AGG ACC AAC ACC CAG CCC TTC GAC CTG CAG GTG TAT CAC Val Val Gln Arg Thr Asn Thr Gln Pro Phe Asp Leu Gln Val Tyr His 1515 1520 1525 1530	5031
CCT TCC CGG CAG CCC ATG GCT CCA AAC CCA TGT GAG GCC AAT GGC GGC Pro Ser Arg Gln Pro Met Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly 1535 1540 1545	5079
CGG GGC CCC TGT TCC CAT CTG TGC CTC ATC AAC TAC AAC CGG ACC GTC Arg Gly Pro Cys Ser His Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val 1550 1555 1560	5127
TCC TGG GCC TGT CCC CAC CTC ATG AAG CTG CAC AAG GAC AAC ACC ACC Ser Trp Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr 1565 1570 1575	5175
TGC TAT GAG TTT AAG AAG TTC CTG CTG TAC GCA CGT CAG ATG GAG ATC Cys Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile 1580 1585 1590	5223
CGG GGC GTG GAC CTG GAT GCC CCG TAC TAC AAT TAT ATC ATC TCC TTC Arg Gly Val Asp Leu Asp Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser Phe 1595 1600 1605 1610	5271
ACG GTG CCT GAT ATC GAC AAT GTC ACG GTG CTG GAC TAT GAT GCC CGA Thr Val Pro Asp Ile Asp Asn Val Thr Val Leu Asp Tyr Asp Ala Arg 1615 1620 1625	5319
GAG CAG CGA GTT TAC TGG TCT GAT GTG CGG ACT CAA GCC ATC AAA AGG Glu Gln Arg Val Tyr Trp Ser Asp Val Arg Thr Gln Ala Ile Lys Arg 1630 1635 1640	5367

FIG. 12A

GCA TTT ATC AAC GGC ACT GGC GTG GAG ACC GTT GTC TCT GCA GAC TTG Ala Phe Ile Asn Gly Thr Gly Val Glu Thr Val Val Ser Ala Asp Leu 1645 1650 1655	5415
CCC AAC GCC CAC GGG CTG GCT GTG GAC TGG GTC TCC CGA AAT CTG TTT Pro Asn Ala His Gly Leu Ala Val Asp Trp Val Ser Arg Asn Leu Phe 1660 1665 1670	5463
TGG ACA AGT TAC GAC ACC AAC AAG AAG CAG ATT AAC GTG GCC CGG CTG Trp Thr Ser Tyr Asp Thr Asn Lys Lys Gln Ile Asn Val Ala Arg Leu 1675 1680 1685 1690	5511
GAC GGC TCC TTC AAG AAT GCG GTG GTG CAG GGC CTG GAG CAG CCC CAC Asp Gly Ser Phe Lys Asn Ala Val Val Gln Gly Leu Glu Gln Pro His 1695 1700 1705	5559
GGC CTG GTC GTC CAC CCG CTT CGT GGC AAG CTC TAC TGG ACT GAT GGG Gly Leu Val Val His Pro Leu Arg Gly Lys Leu Tyr Trp Thr Asp Gly 1710 1715 1720	5607
GAC AAC ATC AGC ATG GCC AAC ATG GAT GGG AGC AAC CAC ACT CTG CTC Asp Asn Ile Ser Met Ala Asn Met Asp Gly Ser Asn His Thr Leu Leu 1725 1730 1735	5655
TTC AGT GGC CAG AAG GGC CCT GTG GGG TTG GCC ATT GAC TTC CCT GAG Phe Ser Gly Gln Lys Gly Pro Val Gly Leu Ala Ile Asp Phe Pro Glu 1740 1745 1750	5703
AGC AAA CTC TAC TGG ATC AGC TCT GGG AAC CAC ACA ATC AAC CGT TGC Ser Lys Leu Tyr Trp Ile Ser Ser Gly Asn His Thr Ile Asn Arg Cys 1755 1760 1765 1770	5751
AAT CTG GAT GGG AGC GAG CTG GAG GTC ATC GAC ACC ATG CGG AGC CAG Asn Leu Asp Gly Ser Glu Leu Glu Val Ile Asp Thr Met Arg Ser Gln 1775 1780 1785	5799
CTG GGC AAG GCC ACT GCC CTG GCC ATC ATG GGG GAC AAG CTG TGG TGG Leu Gly Lys Ala Thr Ala Leu Ala Ile Met Gly Asp Lys Leu Trp Trp 1790 1795 1800	5847
GCA GAT CAG GTG TCA GAG AAG ATG GGC ACG TGC AAC AAA GCC GAT GGC Ala Asp Gln Val Ser Glu Lys Met Gly Thr Cys Asn Lys Ala Asp Gly 1805 1810 1815	5895
TCT GGG TCC GTG GTG CTG CGG AAC AGT ACC ACG TTG GTT ATG CAC ATG Ser Gly Ser Val Val Leu Arg Asn Ser Thr Thr Leu Val Met His Met 1820 1825 1830	5943
AAG GTG TAT GAC GAG AGC ATC CAG CTA GAG CAT GAG GGC ACC AAC CCC Lys Val Tyr Asp Glu Ser Ile Gln Leu Glu His Glu Gly Thr Asn Pro 1835 1840 1845 1850	5991
TGC AGT GTC AAC AAC GGA GAC TGT TCC CAG CTC TGC CTG CCA ACA TCA Cys Ser Val Asn Asn Gly Asp Cys Ser Gln Leu Cys Leu Pro Thr Ser 1855 1860 1865	6039
GAG ACG ACT CGC TCC TGT ATG TGT ACA GCC GGT TAC AGC CTC CGG AGC Glu Thr Thr Arg Ser Cys Met Cys Thr Ala Gly Tyr Ser Leu Arg Ser 1870 1875 1880	6087

FIG. 12A

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GGA CAG CAG GCC TGT GAG GGT GTG GGC TCT TTT CTC CTG TAC TCT GTA Gly Gln Gln Ala Cys Glu Gly Val Gly Ser Phe Leu Leu Tyr Ser Val 1885 1890 1895	6135
CAT GAG GGA ATT CGG GGG ATT CCA CTA GAT CCC AAT GAC AAG TCG GAT His Glu Gly Ile Arg Gly Ile Pro Leu Asp Pro Asn Asp Lys Ser Asp 1900 1905 1910	6183
GCC CTG GTC CCA GTG TCC GGA ACT TCA CTG GCT GTC GGA ATC GAC TTC Ala Leu Val Pro Val Ser Gly Thr Ser Leu Ala Val Gly Ile Asp Phe 1915 1920 1925 1930	6231
CAT GCC GAA AAT GAC ACT ATT TAT TGG GTG GAT ATG GGC CTA AGC ACC His Ala Glu Asn Asp Thr Ile Tyr Trp Val Asp Met Gly Leu Ser Thr 1935 1940 1945	6279
ATC AGC AGG GCC AAG CGT GAC CAG ACA TGG CGA GAG GAT GTG GTG ACC Ile Ser Arg Ala Lys Arg Asp Gln Thr Trp Arg Glu Asp Val Val Thr 1950 1955 1960	6327
AAC GGT ATT GGC CGT GTG GAG GGC ATC GCC GTG GAC TGG ATC GCA GGC Asn Gly Ile Gly Arg Val Glu Gly Ile Ala Val Asp Trp Ile Ala Gly 1965 1970 1975	6375
AAC ATA TAC TGG ACG GAC CAG GGC TTC GAT GTC ATC GAG GTT GCC CGG Asn Ile Tyr Trp Thr Asp Gln Gly Phe Asp Val Ile Glu Val Ala Arg 1980 1985 1990	6423
CTC AAT GGC TCT TTT CGT TAT GTG GTC ATT TCC CAG GGT CTG GAC AAG Leu Asn Gly Ser Phe Arg Tyr Val Val Ile Ser Gln Gly Leu Asp Lys 1995 2000 2005 2010	6471
CCT CGG GCC ATC ACT GTC CAC CCA GAG AAG GGG TAC TTG TTC TGG ACC Pro Arg Ala Ile Thr Val His Pro Glu Lys Gly Tyr Leu Phe Trp Thr 2015 2020 2025	6519
GAG TGG GGT CAT TAC CCA CGT ATT GAG CGG TCT CGC CTT GAT GGC ACA Glu Trp Gly His Tyr Pro Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr 2030 2035 2040	6567
GAG AGA GTG GTG TTG GTT AAT GTC AGC ATC AGC TGG CCC AAT GGC ATC Glu Arg Val Val Leu Val Asn Val Ser Ile Ser Trp Pro Asn Gly Ile 2045 2050 2055	6615
TCA GTA GAC TAT CAG GGC GGC AAG CTC TAC TGG TGT GAT GCT CGG ATG Ser Val Asp Tyr Gln Gly Gly Lys Leu Tyr Trp Cys Asp Ala Arg Met 2060 2065 2070	6663
GAC AAG ATC GAG CGC ATC GAC CTG GAA ACG GGC GAG AAC CGG GAG GTG Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu Val 2075 2080 2085 2090	6711
GTC CTG TCC AGC AAT AAC ATG GAT ATG TTC TCC GTG TCC GTG TTT GAG Val Leu Ser Ser Asn Asn Met Asp Met Phe Ser Val Ser Val Phe Glu 2095 2100 2105	6759
GAC TTC ATC TAC TGG AGT GAC AGA ACT CAC GCC AAT GGC TCC ATC AAG Asp Phe Ile Tyr Trp Ser Asp Arg Thr His Ala Asn Gly Ser Ile Lys 2110 2115 2120	6807

FIG. 12A

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CGC GGC TGC AAA GAC AAT GCT ACA GAC TCC GTG CCT CTG AGG ACA GGC Arg Gly Cys Lys Asp Asn Ala Thr Asp Ser Val Pro Leu Arg Thr Gly 2125 2130 2135	6855
ATT GGT GTT CAG CTT AAA GAC ATC AAG GTC TTC AAC AGG GAC AGG CAG Ile Gly Val Gln Leu Lys Asp Ile Lys Val Phe Asn Arg Asp Arg Gln 2140 2145 2150	6903
AAG GGT ACC AAT GTG TGC GCG GTA GCC AAC GGC GGG TGC CAG CAG CTC Lys Gly Thr Asn Val Cys Ala Val Ala Asn Gly Gly Cys Gln Gln Leu 2155 2160 2165 2170	6951
TGC TTG TAT CGG GGT GGC GGA CAG CGA GCC TGT GCC TGT GCC CAC GGC Cys Leu Tyr Arg Gly Gly Gly Gln Arg Ala Cys Ala Cys Ala His Gly 2175 2180 2185	6999
ATG CTG GCA GAA GAC GGG GCC TCA TGC CGA GAG TAC GCT GGC TAC CTG Met Leu Ala Glu Asp Gly Ala Ser Cys Arg Glu Tyr Ala Gly Tyr Leu 2190 2195 2200	7047
CTC TAC TCA GAG CGG ACC ATC CTC AAG AGC ATC CAC CTG TCG GAT GAG Leu Tyr Ser Glu Arg Thr Ile Leu Lys Ser Ile His Leu Ser Asp Glu 2205 2210 2215	7095
CGT AAC CTC AAC GCA CCG GTG CAG CCC TTT GAA GAC CCC GAG CAC ATG Arg Asn Leu Asn Ala Pro Val Gln Pro Phe Glu Asp Pro Glu His Met 2220 2225 2230	7143
AAA AAT GTC ATC GCC CTG GCC TTT GAC TAC CGA GCA GGC ACC TCC CCG Lys Asn Val Ile Ala Leu Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro 2235 2240 2245 2250	7191
GGG ACC CCT AAC CGC ATC TTC TTC AGT GAC ATC CAC TTT GGG AAC ATC Gly Thr Pro Asn Arg Ile Phe Phe Ser Asp Ile His Phe Gly Asn Ile 2255 2260 2265	7239
CAG CAG ATC AAT GAC GAT GGC TCG GGC AGG ACC ACC ATC GTG GAA AAT Gln Gln Ile Asn Asp Asp Gly Ser Gly Arg Thr Thr Ile Val Glu Asn 2270 2275 2280	7287
GTG GGC TCT GTG GAA GGC CTG GCC TAT CAC CGT GGC TGG GAC ACA CTG Val Gly Ser Val Glu Gly Leu Ala Tyr His Arg Gly Trp Asp Thr Leu 2285 2290 2295	7335
TAC TGG ACA AGC TAC ACC ACA TCC ACC ATC ACC CGC CAC ACC GTG GAC Tyr Trp Thr Ser Tyr Thr Thr Ser Thr Ile Thr Arg His Thr Val Asp 2300 2305 2310	7383
CAG ACT CGC CCA GGG GCC TTC GAG AGG GAG ACA GTC ATC ACC ATG TCC Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met Ser 2315 2320 2325 2330	7431
GGA GAC GAC CAC CCG AGA GCC TTT GTG CTG GAT GAG TGC CAG AAC CTG Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln Asn Leu 2335 2340 2345	7479
ATG TTC TGG ACC AAT TGG AAC GAG CTC CAT CCA AGC ATC ATG CGG GCA Met Phe Trp Thr Asn Trp Asn Glu Leu His Pro Ser Ile Met Arg Ala 2350 2355 2360	7527

FIG. 12A

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(Sh et 31 of 91)

GCC CTA TCC GGA GCC AAC GTC CTG ACC CTC ATT GAG AAG GAC ATC CGC Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu Lys Asp Ile Arg 2365 2370 2375	7575
ACG CCC AAT GGG TTG GCC ATC GAC CAC CGG GCG GAG AAG CTG TAC TTC Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala Glu Lys Leu Tyr Phe 2380 2385 2390	7623
TCG GAT GCC ACC TTG GAC AAG ATC GAG CGC TGC GAG TAC GAC GGC TCC Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg Cys Glu Tyr Asp Gly Ser 2395 2400 2405 2410	7671
CAC CGC TAT GTG ATC CTA AAG TCG GAG CCC GTC CAC CCC TTT GGG TTG His Arg Tyr Val Ile Leu Lys Ser Glu Pro Val His Pro Phe Gly Leu 2415 2420 2425	7719
GCG GTG TAC GGA GAG CAC ATT TTC TGG ACT GAC TGG GTG CGG CGG GCT Ala Val Tyr Gly Glu His Ile Phe Trp Thr Asp Trp Val Arg Arg Ala 2430 2435 2440	7767
GTG CAG CGA GCC AAC AAG TAT GTG GGC AGC GAC ATG AAG CTG CTT CGG Val Gln Arg Ala Asn Lys Tyr Val Gly Ser Asp Met Lys Leu Leu Arg 2445 2450 2455	7815
GTG GAC ATT CCC CAG CAA CCC ATG GGC ATC ATC GCC GTG GCC AAT GAC Val Asp Ile Pro Gln Gln Pro Met Gly Ile Ile Ala Val Ala Asn Asp 2460 2465 2470	7863
ACC AAC AGC TGT GAA CTC TCC CCC TGC CGT ATC AAC AAT GGA GGC TGC Thr Asn Ser Cys Glu Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys 2475 2480 2485 2490	7911
CAG GAT CTG TGT CTG CTC ACC CAC CAA GGC CAC GTC AAC TGT TCC TGT Gln Asp Leu Cys Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys 2495 2500 2505	7959
CGA GGG GGC CGG ATC CTC CAG GAG GAC TTC ACC TGC CGG GCT GTG AAC Arg Gly Gly Arg Ile Leu Gln Glu Asp Phe Thr Cys Arg Ala Val Asn 2510 2515 2520	8007
TCC TCT TGT CGG GCA CAA GAT GAG TTT GAG TGT GCC AAT GGG GAA TGT Ser Ser Cys Arg Ala Gln Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys 2525 2530 2535	8055
ATC AGC TTC AGC CTC ACC TGT GAT GGC GTC TCC CAC TGC AAG GAC AAG Ile Ser Phe Ser Leu Thr Cys Asp Gly Val Ser His Cys Lys Asp Lys 2540 2545 2550	8103
TCC GAT GAG AAG CCC TCC TAC TGC AAC TCA CGC CGC TGC AAG AAG ACT Ser Asp Glu Lys Pro Ser Tyr Cys Asn Ser Arg Arg Cys Lys Lys Thr 2555 2560 2565 2570	8151
TTC CGC CAG TGT AAC AAT GGC CGC TGT GTA TCC AAC ATG CTG TGG TGC Phe Arg Gln Cys Asn Asn Gly Arg Cys Val Ser Asn Met Leu Trp Cys 2575 2580 2585	8199
AAT GGG GTG GAT TAC TGT GGG GAT GGC TCT GAT GAG ATA CCT TGC AAC Asn Gly Val Asp Tyr Cys Gly Asp Gly Ser Asp Glu Ile Pro Cys Asn 2590 2595 2600	8247

FIG. 12A

8449-134

(Sheet 32 of 91)

AAG ACT GCC TGT GGT GTG GGT GAG TTC CGC TGC CGG GAT GGG TCC TGC Lys Thr Ala Cys Gly Val Gly Glu Phe Arg Cys Arg Asp Gly Ser Cys 2605 2610 2615	8295
ATC GGG AAC TCC AGT CGC TGC AAC CAG TTT GTG GAT TGT GAG GAT GCC Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe Val Asp Cys Glu Asp Ala 2620 2625 2630	8343
TCG GAT GAG ATG AAT TGC AGT GCC ACA GAC TGC AGC AGC TAT TTC CGC Ser Asp Glu Met Asn Cys Ser Ala Thr Asp Cys Ser Ser Tyr Phe Arg 2635 2640 2645 2650	8391
CTG GGC GTG AAA GGT GTC CTC TTC CAG CCG TGC GAG CGG ACA TCC CTG Leu Gly Val Lys Gly Val Leu Phe Gln Pro Cys Glu Arg Thr Ser Leu 2655 2660 2665	8439
TGC TAC GCA CCT AGC TGG GTG TGT GAT GGC GCC AAC GAC TGT GGA GAC Cys Tyr Ala Pro Ser Trp Val Cys Asp Gly Ala Asn Asp Cys Gly Asp 2670 2675 2680	8487
TAC AGC GAT GAA CGT GAC TGT CCA GGT GTG AAG CGC CCT AGG TGC CCG Tyr Ser Asp Glu Arg Asp Cys Pro Gly Val Lys Arg Pro Arg Cys Pro 2685 2690 2695	8535
CTC AAT TAC TTT GCC TGC CCC AGC GGG CGC TGT ATC CCC ATG AGC TGG Leu Asn Tyr Phe Ala Cys Pro Ser Gly Arg Cys Ile Pro Met Ser Trp 2700 2705 2710	8583
ACG TGT GAC AAG GAG GAT GAC TGT GAG AAC GGC GAG GAT GAG ACC CAC Thr Cys Asp Lys Glu Asp Asp Cys Glu Asn Gly Glu Asp Glu Thr His 2715 2720 2725 2730	8631
TGC AAC AAG TTC TGC TCA GAG GCA CAG TTC GAG TGC CAG AAC CAC CGG Cys Asn Lys Phe Cys Ser Glu Ala Gln Phe Glu Cys Gln Asn His Arg 2735 2740 2745	8679
TGT ATC TCC AAG CAG TGG CTG TGT GAC GGT AGC GAT GAT TGC GGG GAT Cys Ile Ser Lys Gln Trp Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp 2750 2755 2760	8727
GGC TCC GAT GAG GCA GCT CAC TGT GAA GGC AAG ACA TGT GGC CCC TCC Gly Ser Asp Glu Ala Ala His Cys Glu Gly Lys Thr Cys Gly Pro Ser 2765 2770 2775	8775
TCC TTC TCC TGT CCC GGC ACC CAC GTG TGT GTC CCT GAG CGC TGG CTC Ser Phe Ser Cys Pro Gly Thr His Val Cys Val Pro Glu Arg Trp Leu 2780 2785 2790	8823
TGT GAT GGC GAC AAG GAC TGT ACC GAT GGC GCG GAT GAG AGT GTC ACT Cys Asp Gly Asp Lys Asp Cys Thr Asp Gly Ala Asp Glu Ser Val Thr 2795 2800 2805 2810	8871
GCT GGC TGC CTG TAC AAC AGC ACC TGT GAT GAC CGT GAG TTC ATG TGC Ala Gly Cys Leu Tyr Asn Ser Thr Cys Asp Arg Glu Phe Met Cys 2815 2820 2825	8919
CAG AAC CGC TTG TGT ATT CCC AAG CAT TTC GTG TGC GAC CAT GAC CGT Gln Asn Arg Leu Cys Ile Pro Lys His Phe Val Cys Asp His Asp Arg 2830 2835 2840	8967

FIG. 12A

8449-134

(Sh et 33 of 91)

GAC TGT GCT GAT GGC TCT GAT GAA TCC CCT GAG TGT GAG TAC CCA ACC Asp Cys Ala Asp Gly Ser Asp Glu Ser Pro Glu Cys Glu Tyr Pro Thr 2845 2850 2855	9015
TGC GGG CCC AAT GAA TTC CGC TGT GCC AAT GGG CGT TGT CTG AGC TCC Cys Gly Pro Asn Glu Phe Arg Cys Ala Asn Gly Arg Cys Leu Ser Ser 2860 2865 2870	9063
CGT CAG TGG GAA TGT GAT GGG GAG AAT GAC TGT CAC GAC CAC AGC GAT Arg Gln Trp Glu Cys Asp Gly Glu Asn Asp Cys His Asp His Ser Asp 2875 2880 2885 2890	9111
GAG GCT CCC AAG AAC CCA CAC TGC ACC AGC CCA GAG CAC AAA TGC AAT Glu Ala Pro Lys Asn Pro His Cys Thr Ser Pro Glu His Lys Cys Asn 2895 2900 2905	9159
GCC TCA TCA CAG TTC CTG TGC AGC AGC GGG CGC TGC GTG GCT GAG GCG Ala Ser Ser Gln Phe Leu Cys Ser Ser Gly Arg Cys Val Ala Glu Ala 2910 2915 2920	9207
TTG CTC TGC AAC GGC CAG GAC GAC TGT GGG GAC GGT TCA GAC GAA CGC Leu Leu Cys Asn Gly Gln Asp Asp Cys Gly Asp Gly Ser Asp Glu Arg 2925 2930 2935	9255
GGG TGC CAT GTC AAC GAG TGT CTC AGC CGC AAG CTC AGT GGC TGC AGT Gly Cys His Val Asn Glu Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser 2940 2945 2950	9303
CAG GAC TGC GAG GAC CTC AAG ATA GGC TTT AAG TGC CGC TGT CGC CCG Gln Asp Cys Glu Asp Leu Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro 2955 2960 2965 2970	9351
GGC TTC CGG CTA AAG GAC GAT GGC AGG ACC TGT GCC GAC CTG GAT GAG Gly Phe Arg Leu Lys Asp Asp Gly Arg Thr Cys Ala Asp Leu Asp Glu 2975 2980 2985	9399
TGC AGC ACC ACC TTC CCC TGC AGC CAG CTC TGC ATC AAC ACC CAC GGA Cys Ser Thr Thr Phe Pro Cys Ser Gln Leu Cys Ile Asn Thr His Gly 2990 2995 3000	9447
AGT TAC AAG TGT CTG TGT GTG GAG GGC TAT GCA CCC CGT GGC GGT GAC Ser Tyr Lys Cys Leu Cys Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp 3005 3010 3015	9495
CCC CAC AGC TGC AAA GCT GTG ACC GAT GAG GAG CCA TTT CTC ATC TTT Pro His Ser Cys Lys Ala Val Thr Asp Glu Glu Pro Phe Leu Ile Phe 3020 3025 3030	9543
GCC AAC CGG TAC TAC CTG CGG AAG CTC AAC CTG GAC GGC TCC AAC TAC Ala Asn Arg Tyr Tyr Leu Arg Lys Leu Asn Leu Asp Gly Ser Asn Tyr 3035 3040 3045 3050	9591
ACA CTG CTT AAG CAG GGC CTG AAC AAT GCG GTC GCC TTG GCA TTT GAC Thr Leu Leu Lys Gln Gly Leu Asn Asn Ala Val Ala Leu Ala Phe Asp 3055 3060 3065	9639
TAC CGA GAG CAG ATG ATC TAC TGG ACG GGC GTG ACC ACC CAG GGC AGC Tyr Arg Glu Gln Met Ile Tyr Trp Thr Gly Val Thr Thr Gln Gly Ser 3070 3075 3080	9687

FIG. 12A

8449-134

(Sh et 34 of 91)

ATG ATT CGC AGG ATG CAC CTC AAC GGC AGC AAC GTG CAG GTT CTG CAC Met Ile Arg Arg Met His Leu Asn Gly Ser Asn Val Gln Val Leu His 3085 3090 3095	9735
CGG ACG GGC CTT AGT AAC CCA GAT GGG CTC GCT GTG GAC TGG GTG GGT Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu Ala Val Asp Trp Val Gly 3100 3105 3110	9783
GGC AAC CTG TAC TGG TGT GAC AAG GGC AGA GAT ACC ATT GAG GTG TCC Gly Asn Leu Tyr Trp Cys Asp Lys Gly Arg Asp Thr Ile Glu Val Ser 3115 3120 3125 3130	9831
AAG CTT AAC GGG GCC TAT CGG ACA GTG CTG GTC AGC TCT GGC CTC CGG Lys Leu Asn Gly Ala Tyr Arg Thr Val Leu Val Ser Ser Gly Leu Arg 3135 3140 3145	9879
GAG CCC AGA GCT CTG GTA GTG GAT GTA CAG AAT GGG TAC CTG TAC TGG Glu Pro Arg Ala Leu Val Val Asp Val Gln Asn Gly Tyr Leu Tyr Trp 3150 3155 3160	9927
ACA GAC TGG GGT GAC CAC TCA CTG ATC GGC CGG ATT GGC ATG GAT GGA Thr Asp Trp Gly Asp His Ser Leu Ile Gly Arg Ile Gly Met Asp Gly 3165 3170 3175	9975
TCT GGC CGC AGC ATC ATC GTG GAC ACT AAG ATC ACA TGG CCC AAT GGC Ser Gly Arg Ser Ile Ile Val Asp Thr Lys Ile Thr Trp Pro Asn Gly 3180 3185 3190	10023
CTG ACC GTG GAC TAC GTC ACG GAA CGC ATC TAC TGG GCT GAC GCC CGT Leu Thr Val Asp Tyr Val Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg 3195 3200 3205 3210	10071
GAG GAC TAC ATC GAG TTC GCC AGC CTG GAT GGC TCC AAC CGT CAC GTT Glu Asp Tyr Ile Glu Phe Ala Ser Leu Asp Gly Ser Asn Arg His Val 3215 3220 3225	10119
GTG CTG AGC CAA GAC ATC CCA CAC ATC TTT GCG CTG ACC CTA TTT GAA Val Leu Ser Gln Asp Ile Pro His Ile Phe Ala Leu Thr Leu Phe Glu 3230 3235 3240	10167
GAC TAC GTC TAC TGG ACA GAC TGG GAA ACG AAG TCC ATC AAC CGG GCC Asp Tyr Val Tyr Trp Thr Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala 3245 3250 3255	10215
CAC AAG ACC ACG GGT GCC AAC AAA ACA CTC CTC ATC AGC ACC CTG CAC His Lys Thr Thr Gly Ala Asn Lys Thr Leu Leu Ile Ser Thr Leu His 3260 3265 3270	10263
CGG CCC ATG GAC TTA CAT GTA TTC CAC GCC CTG CGC CAG CCA GAT GTG Arg Pro Met Asp Leu His Val Phe His Ala Leu Arg Gln Pro Asp Val 3275 3280 3285 3290	10311
CCC AAT CAC CCC TGC AAA GTC AAC AAT GGT GGC TGC AGC AAC CTG TGC Pro Asn His Pro Cys Lys Val Asn Asn Gly Gly Cys Ser Asn Leu Cys 3295 3300 3305	10359
CTG CTG TCC CCT GGG GGT GGT CAC AAG TGC GCC TGC CCC ACC AAC TTC Leu Leu Ser Pro Gly Gly Gly His Lys Cys Ala Cys Pro Thr Asn Phe 3310 3315 3320	10407

FIG. 12A

TAT CTG GGT GGC GAT GGC CGT ACC TGT GTG TCC AAC TGC ACA GCA AGC Tyr Leu Gly Gly Asp Gly Arg Thr Cys Val Ser Asn Cys Thr Ala Ser 3325 3330 3335	10455
CAG TTT GTG TGC AAA AAT GAC AAG TGC ATC CCC TTC TGG TGG AAG TGT Gln Phe Val Cys Lys Asn Asp Lys Cys Ile Pro Phe Trp Trp Lys Cys 3340 3345 3350	10503
GAC ACG GAG GAC GAC TGT GGG GAT CAC TCA GAC GAG CCT CCA GAC TGT Asp Thr Glu Asp Asp Cys Gly Asp His Ser Asp Glu Pro Pro Asp Cys 3355 3360 3365 3370	10551
CCC GAG TTC AAG TGC CGC CCA GGC CAG TTC CAG TGC TCC ACC GGC ATC Pro Glu Phe Lys Cys Arg Pro Gly Gln Phe Gln Cys Ser Thr Gly Ile 3375 3380 3385	10599
TGC ACC AAC CCT GCC TTC ATC TGT GAT GGG GAC AAT GAC TGC CAA GAC Cys Thr Asn Pro Ala Phe Ile Cys Asp Gly Asp Asn Asp Cys Gln Asp 3390 3395 3400	10647
AAT AGT GAC GAG GCC AAT TGC GAC ATT CAC GTC TGC TTG CCC AGC CAA Asn Ser Asp Glu Ala Asn Cys Asp Ile His Val Cys Leu Pro Ser Gln 3405 3410 3415	10695
TTC AAG TGC ACC AAC ACC AAC CGC TGC ATT CCT GGC ATC TTC CGT TGC Phe Lys Cys Thr Asn Thr Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys 3420 3425 3430	10743
AAT GGG CAG GAC AAC TGC GGG GAC GGC GAG GAT GAG CGG GAT TGC CCT Asn Gly Gln Asp Asn Cys Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro 3435 3440 3445 3450	10791
GAG GTG ACC TGC GCC CCC AAC CAG TTC CAG TGC TCC ATC ACC AAG CGC Glu Val Thr Cys Ala Pro Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg 3455 3460 3465	10839
TGC ATC CCT CGC GTC TGG GTC TGT GAC AGG GAT AAT CAC TGT GTG GAC Cys Ile Pro Arg Val Trp Val Cys Asp Arg Asp Asn His Cys Val Asp 3470 3475 3480	10887
GGC AGT GAT GAG CCT GCC AAC TGT ACC CAA ATG ACC TGT GGA GTG GAT Gly Ser Asp Glu Pro Ala Asn Cys Thr Gln Met Thr Cys Gly Val Asp 3485 3490 3495	10935
GAG TTC CGC TGC AAG GAT TCT GGC CGC TGC ATC CCC GCG CGC TGG AAG Glu Phe Arg Cys Lys Asp Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys 3500 3505 3510	10983
TGT GAC GGA GAA GAT GAC TGT GGG GAT GGT TCA GAT GAG CCC AAG GAA Cys Asp Gly Glu Asp Asp Cys Gly Asp Gly Ser Asp Glu Pro Lys Glu 3515 3520 3525 3530	11031
GAG TGT GAT GAG CGC ACC TGT GAG CCA TAC CAG TTC CGC TGC AAA AAC Glu Cys Asp Glu Arg Thr Cys Glu Pro Tyr Gln Phe Arg Cys Lys Asn 3535 3540 3545	11079
AAC CGC TGT GTC CCA GGC CGT TGG CAA TGT GAC TAC GAC AAC GAC TGC Asn Arg Cys Val Pro Gly Arg Trp Gln Cys Asp Tyr Asp Asn Asp Cys 3550 3555 3560	11127

FIG. 12A

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GGA GAT AAC TCG GAC GAG GAG AGC TGC ACA CCT CGG CCC TGC TCT GAG Gly Asp Asn Ser Asp Glu Glu Ser Cys Thr Pro Arg Pro Cys Ser Glu 3565 3570 3575	11175
AGT GAG TTT TTC TGT GCC AAT GGC CGC TGC ATC GCT GGG CGC TGG AAG Ser Glu Phe Phe Cys Ala Asn Gly Arg Cys Ile Ala Gly Arg Trp Lys 3580 3585 3590	11223
TGT GAT GGG GAC CAT GAC TGT GCC GAC GGC TCA GAC GAG AAA GAC TGC Cys Asp Gly Asp His Asp Cys Ala Asp Gly Ser Asp Glu Lys Asp Cys 3595 3600 3605 3610	11271
ACC CCC CGC TGT GAT ATG GAC CAG TTC CAG TGC AAG AGT GGC CAC TGC Thr Pro Arg Cys Asp Met Asp Gln Phe Gln Cys Lys Ser Gly His Cys 3615 3620 3625	11319
ATC CCC CTG CGC TGG CCG TGT GAC GCG GAT GCT GAC TGT ATG GAC GGC Ile Pro Leu Arg Trp Pro Cys Asp Ala Asp Ala Asp Cys Met Asp Gly 3630 3635 3640	11367
AGT GAC GAG GAA GCC TGT GGC ACT GGG GTG AGG ACC TGC CCA TTG GAT Ser Asp Glu Glu Ala Cys Gly Thr Gly Val Arg Thr Cys Pro Leu Asp 3645 3650 3655	11415
GAG TTT CAA TGT AAC AAC ACC TTG TGC AAG CCG CTG GCC TGG AAG TGT Glu Phe Gln Cys Asn Asn Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys 3660 3665 3670	11463
GAT GGA GAG GAC GAC TGT GGG GAC AAC TCA GAT GAG AAC CCC GAG GAA Asp Gly Glu Asp Asp Cys Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu 3675 3680 3685 3690	11511
TGC GCC CGG TTC ATC TGC CCT CCC AAC CGG CCT TTC CGC TGC AAG AAT Cys Ala Arg Phe Ile Cys Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn 3695 3700 3705	11559
GAC CGA GTC TGC CTG TGG ATT GGG CGC CAG TGT GAT GGC GTG GAC AAC Asp Arg Val Cys Leu Trp Ile Gly Arg Gln Cys Asp Gly Val Asp Asn 3710 3715 3720	11607
TGT GGA GAT GGG ACT GAC GAG GAG GAC TGT GAG CCC CCC ACG GCC CAG Cys Gly Asp Gly Thr Asp Glu Glu Asp Cys Glu Pro Pro Thr Ala Gln 3725 3730 3735	11655
AAC CCC CAC TGC AAA GAC AAG AAG GAG TTC CTG TGC CGA AAC CAG CGC Asn Pro His Cys Lys Asp Lys Lys Glu Phe Leu Cys Arg Asn Gln Arg 3740 3745 3750	11703
TGT CTA TCA TCC TCC CTG CGC TGT AAC ATG TTC GAT GAC TGC GGC GAT Cys Leu Ser Ser Ser Leu Arg Cys Asn Met Phe Asp Asp Cys Gly Asp 3755 3760 3765 3770	11751
GGC TCC GAT GAA GAA GAT TGC AGC ATC GAC CCC AAG CTG ACC AGC TGT Gly Ser Asp Glu Glu Asp Cys Ser Ile Asp Pro Lys Leu Thr Ser Cys 3775 3780 3785	11799
GCC ACC AAT GCC AGC ATG TGT GGG GAC GAA GCT CGT TGT GTG CGC ACT Ala Thr Asn Ala Ser Met Cys Gly Asp Glu Ala Arg Cys Val Arg Thr 3790 3795 3800	11847

FIG. 12A

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(Sheet 37 of 91)

GAG AAA GCT GCC TAC TGT GCC TGC CGC TCG GGC TTC CAT ACT GTG CCG Glu Lys Ala Ala Tyr Cys Ala Cys Arg Ser Gly Phe His Thr Val Pro 3805 3810 3815	11895
GGC CAG CCC GGA TGC CAG GAC ATC AAC GAG TGC CTG CGC TTT GGT ACC Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu Cys Leu Arg Phe Gly Thr 3820 3825 3830	11943
TGC TCT CAG CTC TGG AAC AAA CCC AAG GGA GGC CAC CTC TGC AGC TGT Cys Ser Gln Leu Trp Asn Lys Pro Lys Gly Gly His Leu Cys Ser Cys 3835 3840 3845 3850	11991
GCC CGC AAC TTC ATG AAG ACA CAC AAC ACC TGC AAA GCT GAA GGC TCC Ala Arg Asn Phe Met Lys Thr His Asn Thr Cys Lys Ala Glu Gly Ser 3855 3860 3865	12039
GAG TAC CAG GTG CTA TAC ATC GCG GAT GAC AAC GAG ATC CGC AGC TTG Glu Tyr Gln Val Leu Tyr Ile Ala Asp Asp Asn Glu Ile Arg Ser Leu 3870 3875 3880	12087
TTC CCG GGC CAC CCC CAC TCA GCC TAC GAG CAG ACA TTC CAG GGC GAT Phe Pro Gly His Pro His Ser Ala Tyr Glu Gln Thr Phe Gln Gly Asp 3885 3890 3895	12135
GAG AGT GTC CGC ATA GAT GCC ATG GAT GTC CAT GTC AAG GCC GGC CGT Glu Ser Val Arg Ile Asp Ala Met Asp Val His Val Lys Ala Gly Arg 3900 3905 3910	12183
GTC TAC TGG ACT AAC TGG CAC ACG GGC ACA ATC TCC TAC AGG AGC CTG Val Tyr Trp Thr Asn Trp His Thr Gly Thr Ile Ser Tyr Arg Ser Leu 3915 3920 3925 3930	12231
CCC CCT GCC GCC CCT CCT ACC ACT TCC AAC CGC CAC CGG AGG CAG ATC Pro Pro Ala Ala Pro Pro Thr Thr Ser Asn Arg His Arg Arg Gln Ile 3935 3940 3945	12279
GAC CGG GGT GTC ACC CAC CTC AAT ATT TCA GGG CTG AAG ATG CCG AGG Asp Arg Gly Val Thr His Leu Asn Ile Ser Gly Leu Lys Met Pro Arg 3950 3955 3960	12327
GGT ATC GCT ATC GAC TGG GTG GCC GGG AAT GTG TAC TGG ACC GAT TCC Gly Ile Ala Ile Asp Trp Val Ala Gly Asn Val Tyr Trp Thr Asp Ser 3965 3970 3975	12375
GGC CGA GAC GTG ATT GAG GTG GCG CAA ATG AAG GGC GAG AAC CGC AAG Gly Arg Asp Val Ile Glu Val Ala Gln Met Lys Gly Glu Asn Arg Lys 3980 3985 3990	12423
ACG CTC ATC TCG GGC ATG ATT GAT GAG CCC CAT GCC ATC GTG GTG GAC Thr Leu Ile Ser Gly Met Ile Asp Glu Pro His Ala Ile Val Val Asp 3995 4000 4005 4010	12471
CCT CTG AGG GGC ACC ATG TAC TGG TCA GAC TGG GGG AAC CAC CCC AAG Pro Leu Arg Gly Thr Met Tyr Trp Ser Asp Trp Gly Asn His Pro Lys 4015 4020 4025	12519
ATT GAA ACA GCA GCG ATG GAT GGC ACC CTT CGG GAG ACT CTC GTG CAA Ile Glu Thr Ala Ala Met Asp Gly Thr Leu Arg Glu Thr Leu Val Gln 4030 4035 4040	12567

FIG. 12A

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(Sheet 38 of 91)

GAC	AAC	ATT	CAG	TGG	CCT	ACA	GGG	CTG	GCT	GTG	GAC	TAT	CAC	AAT	GAA	12615
Asp	Asn	Ile	Gln	Trp	Pro	Thr	Gly	Leu	Ala	Val	Asp	Tyr	His	Asn	Glu	
	4045						4050					4055				
CGG	CTC	TAC	TGG	GCA	GAT	GCC	AAG	CTT	TCG	GTC	ATC	GGC	AGC	ATC	CGG	12663
Arg	Leu	Tyr	Trp	Ala	Asp	Ala	Lys	Leu	Ser	Val	Ile	Gly	Ser	Ile	Arg	
	4060					4065				4070						
CTC	AAC	GGC	ACT	GAC	CCC	ATT	GTG	GCT	GCT	GAC	AGC	AAA	CGA	GGC	CTA	12711
Leu	Asn	Gly	Thr	Asp	Pro	Ile	Val	Ala	Ala	Asp	Ser	Lys	Arg	Gly	Leu	
4075					4080					4085					4090	
AGT	CAC	CCC	TTC	AGC	ATC	GAT	GTG	TTT	GAA	GAC	TAC	ATC	TAC	GGA	GTC	12759
Ser	His	Pro	Phe	Ser	Ile	Asp	Val	Phe	Glu	Asp	Tyr	Ile	Tyr	Gly	Val	
				4095				4100						4105		
ACT	TAC	ATC	AAT	AAT	CGT	GTC	TTC	AAG	ATC	CAC	AAG	TTT	GGA	CAC	AGC	12807
Thr	Tyr	Ile	Asn	Asn	Arg	Val	Phe	Lys	Ile	His	Lys	Phe	Gly	His	Ser	
			4110				4115						4120			
CCC	TTG	TAC	AAC	CTA	ACT	GGG	GGC	CTG	AGC	CAT	GCC	TCT	GAT	GTA	GTC	12855
Pro	Leu	Tyr	Asn	Leu	Thr	Gly	Gly	Leu	Ser	His	Ala	Ser	Asp	Val	Val	
	4125					4130					4135					
CTT	TAC	CAT	CAA	CAC	AAG	CAG	CCT	GAA	GTG	ACC	AAC	CCC	TGT	GAC	CGC	12903
Leu	Tyr	His	Gln	His	Lys	Gln	Pro	Glu	Val	Thr	Asn	Pro	Cys	Asp	Arg	
	4140					4145				4150						
AAG	AAA	TGC	GAA	TGG	CTG	TGT	CTG	CTG	AGC	CCC	AGC	GGG	CCT	GTC	TGC	12951
Lys	Lys	Cys	Glu	Trp	Leu	Cys	Leu	Leu	Ser	Pro	Ser	Gly	Pro	Val	Cys	
4155					4160					4165					4170	
ACC	TGT	CCC	AAT	GGA	AAG	AGG	CTG	GAT	AAT	GGC	ACC	TGT	GTG	CCT	GTG	12999
Thr	Cys	Pro	Asn	Gly	Lys	Arg	Leu	Asp	Asn	Gly	Thr	Cys	Val	Pro	Val	
				4175				4180					4185			
CCC	TCT	CCA	ACA	CCC	CCT	CCA	GAT	GCC	CCT	AGG	CCT	GGA	ACC	TGC	ACT	13047
Pro	Ser	Pro	Thr	Pro	Pro	Pro	Asp	Ala	Pro	Arg	Pro	Gly	Thr	Cys	Thr	
			4190				4195						4200			
CTG	CAG	TGC	TTC	AAT	GGT	GGT	AGT	TGT	TTC	CTC	AAC	GCT	CGG	AGG	CAG	13095
Leu	Gln	Cys	Phe	Asn	Gly	Gly	Ser	Cys	Phe	Leu	Asn	Ala	Arg	Arg	Gln	
	4205					4210						4215				
CCC	AAG	TGC	CGT	TGC	CAG	CCC	CGT	TAC	ACA	GGC	GAT	AAG	TGT	GAG	CTG	13143
Pro	Lys	Cys	Arg	Cys	Gln	Pro	Arg	Tyr	Thr	Gly	Asp	Lys	Cys	Glu	Leu	
	4220				4225					4230						
GAT	CAG	TGC	TGG	GAA	TAC	TGT	CAC	AAC	GGA	GGC	ACC	TGT	GCG	GCT	TCC	13191
Asp	Gln	Cys	Trp	Glu	Tyr	Cys	His	Asn	Gly	Gly	Thr	Cys	Ala	Ala	Ser	
4235				4240					4245					4250		
CCA	TCT	GGC	ATG	CCC	ACG	TGC	CGC	TGT	CCC	ACT	GGC	TTC	ACG	GGC	CCC	13239
Pro	Ser	Gly	Met	Pro	Thr	Cys	Arg	Cys	Pro	Thr	Gly	Phe	Thr	Gly	Pro	
			4255				4260						4265			
AAA	TGC	ACC	GCA	CAG	GTG	TGT	GCA	GGC	TAC	TGC	TCT	AAC	AAC	AGC	ACC	13287
Lys	Cys	Thr	Ala	Gln	Val	Cys	Ala	Gly	Tyr	Cys	Ser	Asn	Asn	Ser	Thr	
			4270				4275						4280			

FIG. 12A

TGC ACC GTC AAC CAG GGC AAC CAG CCC CAG TGC CGA TGT CTA CCT GGC Cys Thr Val Asn Gln Gly Asn Gln Pro Gln Cys Arg Cys Leu Pro Gly 4285 4290 4295	13335
TTC CTG GGC GAC CGT TGC CAG TAC CGG CAG TGC TCT GGC TTC TGT GAG Phe Leu Gly Asp Arg Cys Gln Tyr Arg Gln Cys Ser Gly Phe Cys Glu 4300 4305 4310	13383
AAC TTT GGC ACC TGT CAG ATG GCT GCT GAT GGC TCC CGA CAA TGT CGC Asn Phe Gly Thr Cys Gln Met Ala Ala Asp Gly Ser Arg Gln Cys Arg 4315 4320 4325 4330	13431
TGC ACC GTC TAC TTT GAG GGA CCA AGG TGT GAG GTG AAC AAG TGT AGT Cys Thr Val Tyr Phe Glu Gly Pro Arg Cys Glu Val Asn Lys Cys Ser 4335 4340 4345	13479
CGC TGT CTC CAA GGC GCC TGT GTG GTC AAT AAG CAG ACC GGA GAT GTC Arg Cys Leu Gln Gly Ala Cys Val Val Asn Lys Gln Thr Gly Asp Val 4350 4355 4360	13527
ACA TGC AAC TGC ACT GAT GGC CGG GTA GCC CCC AGT TGT CTC ACC TGC Thr Cys Asn Cys Thr Asp Gly Arg Val Ala Pro Ser Cys Leu Thr Cys 4365 4370 4375	13575
ATC GAT CAC TGT AGC AAT GGT GGC TCC TGC ACC ATG AAC AGC AAG ATG Ile Asp His Cys Ser Asn Gly Gly Ser Cys Thr Met Asn Ser Lys Met 4380 4385 4390	13623
ATG CCT GAG TGC CAG TGC CCG CCC CAT ATG ACA GGA CCC CGG TGC CAG Met Pro Glu Cys Gln Cys Pro Pro His Met Thr Gly Pro Arg Cys Gln 4395 4400 4405 4410	13671
GAG CAG GTT GTT AGT CAG CAA CAG CCT GGG CAT ATG GCC TCC ATC CTG Glu Gln Val Val Ser Gln Gln Gln Pro Gly His Met Ala Ser Ile Leu 4415 4420 4425	13719
ATC CCT CTG CTG CTG CTT CTC CTG CTG CTT CTG GTG GCT GGC GTG GTG Ile Pro Leu Leu Leu Leu Leu Leu Leu Leu Val Ala Gly Val Val 4430 4435 4440	13767
TTC TGG TAT AAG CGG CGA GTC CGA GGG GCT AAG GGC TTC CAG CAC CAG Phe Trp Tyr Lys Arg Arg Val Arg Gly Ala Lys Gly Phe Gln His Gln 4445 4450 4455	13815
CGG ATG ACC AAT GGG GCC ATG AAT GTG GAA ATT GGA AAC CCT ACC TAC Arg Met Thr Asn Gly Ala Met Asn Val Glu Ile Gly Asn Pro Thr Tyr 4460 4465 4470	13863
AAG ATG TAT GAA GGT GGA GAG CCC GAT GAT GTC GGG GGC CTA CTG GAT Lys Met Tyr Glu Gly Gly Glu Pro Asp Asp Val Gly Gly Leu Leu Asp 4475 4480 4485 4490	13911
GCT GAT TTT GCC CTT GAC CCT GAC AAG CCT ACC AAC TTC ACC AAC CCA Ala Asp Phe Ala Leu Asp Pro Asp Lys Pro Thr Asn Phe Thr Asn Pro 4495 4500 4505	13959
GTG TAT GCC ACG CTC TAC ATG GGG GGC CAC GGC AGC CGC CAT TCC CTG Val Tyr Ala Thr Leu Tyr Met Gly Gly His Gly Ser Arg His Ser Leu 4510 4515 4520	14007

FIG. 12A

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GCC AGC ACG GAC GAG AAG CGA GAA CTG CTG GGC CGG GGA CCT GAA GAC 14055
 Ala Ser Thr Asp Glu Lys Arg Glu Leu Leu Gly Arg Gly Pro Glu Asp
 4525 4530 4535

GAG ATA GGA GAT CCC TTG GCA TAGGGCCCTG CCCCACGGA TGTCCCCAGA AAGC 14110
 CCCCTGCCAC ATGAGTCTTT CAATGAACCC CCTCCCCAGC CGGCCCTTCT CCGGCCCTGC 14170
 Glu Ile Gly Asp Pro Leu Ala
 4540 4545

CGGGTGTACA AATGTAAAAA TGAAGGAATT ACTTTTTATA TGTGAGCGAG CAAGCGAGCA 14230
 AGCACAGTAT TATCTCTTTG CATTTTCCTTC CTGCCTGCTC CTCAGTATCC CCCCATGCT 14290
 GCCTTGAGGG GCGGGGAGG GCTTTGTGGC TCAAAGGTAT GAAGGAGTCC ACATGTTCCC 14350
 TACCGAGCAT ACCCCTGGAA GCCTGGCGGC ACGGCCTCCC CACCACGCCT GTGCAAGACA 14410
 CTCACGGGG CTCCGTGTCC CAGCTTTCCT TTCCTTGGCT CTCTGGGGTT AGTTCAGGGG 14470
 AGGTGGAGTC CTCTGCTGAC CCTGTCTGGA AGATTTGGCT CTAGCTGAGG AAGGAGTCTT 14530
 TTAGTTGAGG GAAGTCACCC CAAACCCAG CTCCCACTTT CAGGGGCACC TCTCAGATGG 14590
 CCATGCTCAG TATCCCTTCC AGACAGGCCC TCCCCTCTCT AGCGCCCCCT CTGTGGCTCC 14650
 TAGGGCTGAA CACATTCTTT GGTAAGTCTC CCCCAGCCT CCCATCCCCC TGAGGGCCAG 14710
 GAAGAGTCGG GGCACACCAA GGAAGGGCAA GCGGGCAGCC CCATTTTGGG GACGTGAACG 14770
 TTTTAATAAT TTTTGCTGAA TTCCTTTACA ACTAAATAAC ACAGATATTG TTATAAATAA 14830
 AATTGTAAAA AAAAAAAAAA

FIG. 12A

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Met	Leu	Thr	Pro	Pro	Leu	Leu	Leu	Leu	Val	Pro	Leu	Leu	Ser	Ala	Leu
1				5					10					15	
Val	Ser	Gly	Ala	Thr	Met	Asp	Ala	Pro	Lys	Thr	Cys	Ser	Pro	Lys	Gln
			20					25					30		
Phe	Ala	Cys	Arg	Asp	Gln	Ile	Thr	Cys	Ile	Ser	Lys	Gly	Trp	Arg	Cys
		35					40					45			
Asp	Gly	Glu	Arg	Asp	Cys	Pro	Asp	Gly	Ser	Asp	Glu	Ala	Pro	Glu	Ile
	50					55					60				
Cys	Pro	Gln	Ser	Lys	Ala	Gln	Arg	Cys	Pro	Pro	Asn	Glu	His	Ser	Cys
65					70					75					80
Leu	Gly	Thr	Glu	Leu	Cys	Val	Pro	Met	Ser	Arg	Leu	Cys	Asn	Gly	Ile
				85					90					95	
Gln	Asp	Cys	Met	Asp	Gly	Ser	Asp	Glu	Gly	Ala	His	Cys	Arg	Glu	Leu
			100					105					110		
Arg	Ala	Asn	Cys	Ser	Arg	Met	Gly	Cys	Gln	His	His	Cys	Val	Pro	Thr
		115					120					125			
Pro	Ser	Gly	Pro	Thr	Cys	Tyr	Cys	Asn	Ser	Ser	Phe	Gln	Leu	Glu	Ala
	130					135					140				
Asp	Gly	Lys	Thr	Cys	Lys	Asp	Phe	Asp	Glu	Cys	Ser	Val	Tyr	Gly	Thr
145					150					155					160
Cys	Ser	Gln	Leu	Cys	Thr	Asn	Thr	Asp	Gly	Ser	Phe	Thr	Cys	Gly	Cys
				165					170					175	
Val	Glu	Gly	Tyr	Leu	Leu	Gln	Pro	Asp	Asn	Arg	Ser	Cys	Lys	Ala	Lys
			180					185					190		
Asn	Glu	Pro	Val	Asp	Arg	Pro	Pro	Val	Leu	Leu	Ile	Ala	Asn	Ser	Gln
		195					200					205			
Asn	Ile	Leu	Ala	Thr	Tyr	Leu	Ser	Gly	Ala	Gln	Val	Ser	Thr	Ile	Thr
	210					215					220				
Pro	Thr	Ser	Thr	Arg	Gln	Thr	Thr	Ala	Met	Asp	Phe	Ser	Tyr	Ala	Asn
225					230					235					240
Glu	Thr	Val	Cys	Trp	Val	His	Val	Gly	Asp	Ser	Ala	Ala	Gln	Thr	Gln
				245				250						255	
Leu	Lys	Cys	Ala	Arg	Met	Pro	Gly	Leu	Lys	Gly	Phe	Val	Asp	Glu	His
			260				265						270		
Thr	Ile	Asn	Ile	Ser	Leu	Ser	Leu	His	His	Val	Glu	Gln	Met	Ala	Ile
		275					280					285			
Asp	Trp	Leu	Thr	Gly	Asn	Phe	Tyr	Phe	Val	Asp	Asp	Ile	Asp	Asp	Arg
	290				295					300					
Ile	Phe	Val	Cys	Asn	Arg	Asn	Gly	Asp	Thr	Cys	Val	Thr	Leu	Leu	Asp
305					310					315					320
Leu	Glu	Leu	Tyr	Asn	Pro	Lys	Gly	Ile	Ala	Leu	Asp	Pro	Ala	Met	Gly
				325					330					335	
Lys	Val	Phe	Phe	Thr	Asp	Tyr	Gly	Gln	Ile	Pro	Lys	Val	Glu	Arg	Cys
			340				345						350		
Asp	Met	Asp	Gly	Gln	Asn	Arg	Thr	Lys	Leu	Val	Asp	Ser	Lys	Ile	Val
		355					360					365			
Phe	Pro	His	Gly	Ile	Thr	Leu	Asp	Leu	Val	Ser	Arg	Leu	Val	Tyr	Trp
	370					375					380				
Ala	Asp	Ala	Tyr	Leu	Asp	Tyr	Ile	Glu	Val	Val	Asp	Tyr	Glu	Gly	Lys
385					390					395					400
Gly	Arg	Gln	Thr	Ile	Ile	Gln	Gly	Ile	Leu	Ile	Glu	His	Leu	Tyr	Gly
				405					410					415	
Leu	Thr	Val	Phe	Glu	Asn	Tyr	Leu	Tyr	Ala	Thr	Asn	Ser	Asp	Asn	Ala
			420				425						430		
Asn	Thr	Gln	Lys	Thr	Ser	Val	Ile	Arg	Val	Asn	Arg	Phe	Asn	Ser	
		435				440					445				
Thr	Glu	Tyr	Gln	Val	Val	Thr	Arg	Val	Asp	Lys	Gly	Gly	Ala	Leu	His
	450					455					460				

FIG. 12B

Ile Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu
 465 470 475 480
 Asn Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu
 485 490 495
 Ala Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser
 500 505 510
 Leu Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe
 515 520 525
 Leu Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met
 530 535 540
 Gly Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met
 545 550 555 560
 Asn Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe
 565 570 575
 Ala Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr
 580 585 590
 Glu Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val
 595 600 605
 Ala Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro
 610 615 620
 Lys Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg
 625 630 635 640
 Lys Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val
 645 650 655
 Asp Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro
 660 665 670
 Lys Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser
 675 680 685
 His Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly
 690 695 700
 Leu Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe
 705 710 715 720
 Tyr Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile
 725 730 735
 Val Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His
 740 745 750
 Gly Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg
 755 760 765
 Leu Glu Arg Gly Val Ala Gly Ala Pro Pro Thr Val Thr Leu Leu Arg
 770 775 780
 Ser Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala His Glu
 785 790 795 800
 Gln Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser
 805 810 815
 Ser Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu
 820 825 830
 Asp Gln Val Leu Asp Thr Asp Gly Val Thr Cys Leu Ala Asn Pro Ser
 835 840 845
 Tyr Val Pro Pro Pro Gln Cys Gln Pro Gly Gln Phe Ala Cys Ala Asn
 850 855 860
 Asn Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys
 865 870 875 880
 Leu Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys
 885 890 895
 Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg
 900 905 910
 Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser
 915 920 925

FIG. 12B

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(Sheet 43 of 91)

Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys
 930 935 940
 Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp
 945 950 955 960
 Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr
 965 970 975
 Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn
 980 985 990
 Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp
 995 1000 1005
 Glu Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
 1010 1015 1020
 Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn Asp
 1025 1030 1035 1040
 Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn Gln Ala
 1045 1050 1055
 Thr Arg Pro Pro Gly Gly Cys His Ser Asp Glu Phe Gln Cys Pro Leu
 1060 1065 1070
 Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp Gly Asp Thr Asp
 1075 1080 1085
 Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu Gly Val Thr His Val
 1090 1095 1100
 Cys Asp Pro Asn Val Lys Phe Gly Cys Lys Asp Ser Ala Arg Cys Ile
 1105 1110 1115 1120
 Ser Lys Ala Trp Val Cys Asp Gly Asp Ser Asp Cys Glu Asp Asn Ser
 1125 1130 1135
 Asp Glu Glu Asn Cys Glu Ala Leu Ala Cys Arg Pro Pro Ser His Pro
 1140 1145 1150
 Cys Ala Asn Asn Thr Ser Val Cys Leu Pro Pro Asp Lys Leu Cys Asp
 1155 1160 1165
 Gly Lys Asp Asp Cys Gly Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp
 1170 1175 1180
 Gln Cys Ser Leu Asn Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala
 1185 1190 1195 1200
 Pro Gly Glu Gly Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly
 1205 1210 1215
 Ser Asp Asn His Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu
 1220 1225 1230
 Lys Cys Ser Gln Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser
 1235 1240 1245
 Cys Tyr Glu Gly Trp Val Leu Glu Pro Asp Gly Glu Thr Cys Arg Ser
 1250 1255 1260
 Leu Asp Pro Phe Lys Leu Phe Ile Ile Phe Ser Asn Arg His Glu Ile
 1265 1270 1275 1280
 Arg Arg Ile Asp Leu His Lys Gly Asp Tyr Ser Val Leu Val Pro Gly
 1285 1290 1295
 Leu Arg Asn Thr Ile Ala Leu Asp Phe His Leu Ser Gln Ser Ala Leu
 1300 1305 1310
 Tyr Trp Thr Asp Ala Val Glu Asp Lys Ile Tyr Arg Gly Lys Leu Leu
 1315 1320 1325
 Asp Asn Gly Ala Leu Thr Ser Phe Glu Val Val Ile Gln Tyr Gly Leu
 1330 1335 1340
 Ala Thr Pro Glu Gly Leu Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr
 1345 1350 1355 1360
 Trp Val Glu Ser Asn Leu Asp Gln Ile Glu Val Ala Lys Leu Asp Gly
 1365 1370 1375
 Thr Leu Arg Thr Thr Leu Leu Ala Gly Asp Ile Glu His Pro Arg Ala
 1380 1385 1390
 Ile Ala Leu Asp Pro Arg Asp Gly Ile Leu Phe Trp Thr Asp Trp Asp

FIG. 12B

1395 1400 1405
 Ala Ser Leu Pro Arg Ile Glu Ala Ala Ser Met Ser Gly Ala Gly Arg
 1410 1415 1420
 Arg Thr Ile His Arg Glu Thr Gly Ser Gly Gly Cys Ala Asn Gly Leu
 425 1430 1435 1440
 Thr Val Asp Tyr Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser
 1445 1450 1455
 Asp Ala Ile Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val
 1460 1465 1470
 Leu Arg Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr
 1475 1480 1485
 Gly Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys
 1490 1495 1500
 Ala Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr Asn
 505 1510 1515 1520
 Thr Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln Pro Met
 1525 1530 1535
 Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly Arg Gly Pro Cys Ser His
 1540 1545 1550
 Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Trp Ala Cys Pro His
 1555 1560 1565
 Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys Tyr Glu Phe Lys Lys
 1570 1575 1580
 Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile Arg Gly Val Asp Leu Asp
 585 1590 1595 1600
 Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser Phe Thr Val Pro Asp Ile Asp
 1605 1610 1615
 Asn Val Thr Val Leu Asp Tyr Asp Ala Arg Glu Gln Arg Val Tyr Trp
 1620 1625 1630
 Ser Asp Val Arg Thr Gln Ala Ile Lys Arg Ala Phe Ile Asn Gly Thr
 1635 1640 1645
 Gly Val Glu Thr Val Val Ser Ala Asp Leu Pro Asn Ala His Gly Leu
 1650 1655 1660
 Ala Val Asp Trp Val Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr
 665 1670 1675 1680
 Asn Lys Lys Gln Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn
 1685 1690 1695
 Ala Val Val Gln Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro
 1700 1705 1710
 Leu Arg Gly Lys Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala
 1715 1720 1725
 Asn Met Asp Gly Ser Asn His Thr Leu Leu Phe Ser Gly Gln Lys Gly
 1730 1735 1740
 Pro Val Gly Leu Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp Ile
 745 1750 1755 1760
 Ser Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly Ser Glu
 1765 1770 1775
 Leu Glu Val Ile Asp Thr Met Arg Ser Gln Leu Gly Lys Ala Thr Ala
 1780 1785 1790
 Leu Ala Ile Met Gly Asp Lys Leu Trp Trp Ala Asp Gln Val Ser Glu
 1795 1800 1805
 Lys Met Gly Thr Cys Asn Lys Ala Asp Gly Ser Gly Ser Val Val Leu
 1810 1815 1820
 Arg Asn Ser Thr Thr Leu Val Met His Met Lys Val Tyr Asp Glu Ser
 825 1830 1835 1840
 Ile Gln Leu Glu His Glu Gly Thr Asn Pro Cys Ser Val Asn Asn Gly
 1845 1850 1855
 Asp Cys Ser Gln Leu Cys Leu Pro Thr Ser Glu Thr Thr Arg Ser Cys
 1860 1865 1870

FIG. 12B

Met Cys Thr Ala Gly Tyr Ser Leu Arg Ser Gly Gln Gln Ala Cys Glu
 1875 1880 1885
 Gly Val Gly Ser Phe Leu Leu Tyr Ser Val His Glu Gly Ile Arg Gly
 1890 1895 1900
 Ile Pro Leu Asp Pro Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser
 905 1910 1915 1920
 Gly Thr Ser Leu Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr
 1925 1930 1935
 Ile Tyr Trp Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg
 1940 1945 1950
 Asp Gln Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val
 1955 1960 1965
 Glu Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp
 1970 1975 1980
 Gln Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe Arg
 985 1990 1995 2000
 Tyr Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile Thr Val
 2005 2010 2015
 His Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly His Tyr Pro
 2020 2025 2030
 Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg Val Val Leu Val
 2035 2040 2045
 Asn Val Ser Ile Ser Trp Pro Asn Gly Ile Ser Val Asp Tyr Gln Gly
 2050 2055 2060
 Gly Lys Leu Tyr Trp Cys Asp Ala Arg Met Asp Lys Ile Glu Arg Ile
 065 2070 2075 2080
 Asp Leu Glu Thr Gly Glu Asn Arg Glu Val Val Leu Ser Ser Asn Asn
 2085 2090 2095
 Met Asp Met Phe Ser Val Ser Val Phe Glu Asp Phe Ile Tyr Trp Ser
 2100 2105 2110
 Asp Arg Thr His Ala Asn Gly Ser Ile Lys Arg Gly Cys Lys Asp Asn
 2115 2120 2125
 Ala Thr Asp Ser Val Pro Leu Arg Thr Gly Ile Gly Val Gln Leu Lys
 2130 2135 2140
 Asp Ile Lys Val Phe Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys
 145 2150 2155 2160
 Ala Val Ala Asn Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Gly
 2165 2170 2175
 Gly Gln Arg Ala Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly
 2180 2185 2190
 Ala Ser Cys Arg Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr
 2195 2200 2205
 Ile Leu Lys Ser Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro
 2210 2215 2220
 Val Gln Pro Phe Glu Asp Pro Glu His Met Lys Asn Val Ile Ala Leu
 225 2230 2235 2240
 Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn Arg Ile
 2245 2250 2255
 Phe Phe Ser Asp Ile His Phe Gly Asn Ile Gln Gln Ile Asn Asp Asp
 2260 2265 2270
 Gly Ser Gly Arg Thr Thr Ile Val Glu Asn Val Gly Ser Val Glu Gly
 2275 2280 2285
 Leu Ala Tyr His Arg Gly Trp Asp Thr Leu Tyr Trp Thr Ser Tyr Thr
 2290 2295 2300
 Thr Ser Thr Ile Thr Arg His Thr Val Asp Gln Thr Arg Pro Gly Ala
 305 2310 2315 2320
 Phe Glu Arg Glu Thr Val Ile Thr Met Ser Gly Asp Asp His Pro Arg
 2325 2330 2335
 Ala Phe Val Leu Asp Glu Cys Gln Asn Leu Met Phe Trp Thr Asn Trp

FIG. 12B

2340	2345	2350
Asn Glu Leu His Pro Ser Ile Met Arg Ala Ala Leu Ser Gly Ala Asn		
2355	2360	2365
Val Leu Thr Leu Ile Glu Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala		
2370	2375	2380
Ile Asp His Arg Ala Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp		
385	2390	2395
Lys Ile Glu Arg Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu		
2405	2410	2415
Lys Ser Glu Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His		
2420	2425	2430
Ile Phe Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys		
2435	2440	2445
Tyr Val Gly Ser Asp Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln		
2450	2455	2460
Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu Leu		
465	2470	2475
Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys Leu Leu		
2485	2490	2495
Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly Arg Ile Leu		
2500	2505	2510
Gln Glu Asp Phe Thr Cys Arg Ala Val Asn Ser Ser Cys Arg Ala Gln		
2515	2520	2525
Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile Ser Phe Ser Leu Thr		
2530	2535	2540
Cys Asp Gly Val Ser His Cys Lys Asp Lys Ser Asp Glu Lys Pro Ser		
545	2550	2555
Tyr Cys Asn Ser Arg Arg Cys Lys Lys Thr Phe Arg Gln Cys Asn Asn		
2565	2570	2575
Gly Arg Cys Val Ser Asn Met Leu Trp Cys Asn Gly Val Asp Tyr Cys		
2580	2585	2590
Gly Asp Gly Ser Asp Glu Ile Pro Cys Asn Lys Thr Ala Cys Gly Val		
2595	2600	2605
Gly Glu Phe Arg Cys Arg Asp Gly Ser Cys Ile Gly Asn Ser Ser Arg		
2610	2615	2620
Cys Asn Gln Phe Val Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys		
625	2630	2635
Ser Ala Thr Asp Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val		
2645	2650	2655
Leu Phe Gln Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp		
2660	2665	2670
Val Cys Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp		
2675	2680	2685
Cys Pro Gly Val Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys		
2690	2695	2700
Pro Ser Gly Arg Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu Asp		
705	2710	2715
Asp Cys Glu Asn Gly Glu Asp Glu Thr His Cys Asn Lys Phe Cys Ser		
2725	2730	2735
Glu Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser Lys Gln Trp		
2740	2745	2750
Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser Asp Glu Ala Ala		
2755	2760	2765
His Cys Glu Gly Lys Thr Cys Gly Pro Ser Ser Phe Ser Cys Pro Gly		
2770	2775	2780
Thr His Val Cys Val Pro Glu Arg Trp Leu Cys Asp Gly Asp Lys Asp		
785	2790	2795
Cys Thr Asp Gly Ala Asp Glu Ser Val Thr Ala Gly Cys Leu Tyr Asn		
2805	2810	2815

FIG. 12B

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Ser Thr Cys Asp Asp Arg Glu Phe Met Cys Gln Asn Arg Leu Cys Ile
 2820 2825 2830
 Pro Lys His Phe Val Cys Asp His Asp Arg Asp Cys Ala Asp Gly Ser
 2835 2840 2845
 Asp Glu Ser Pro Glu Cys Glu Tyr Pro Thr Cys Gly Pro Asn Glu Phe
 2850 2855 2860
 Arg Cys Ala Asn Gly Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp
 865 2870 2875 2880
 Gly Glu Asn Asp Cys His Asp His Ser Asp Glu Ala Pro Lys Asn Pro
 2885 2890 2895
 His Cys Thr Ser Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu
 2900 2905 2910
 Cys Ser Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln
 2915 2920 2925
 Asp Asp Cys Gly Asp Gly Ser Asp Glu Arg Gly Cys His Val Asn Glu
 2930 2935 2940
 Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp Leu
 945 2950 2955 2960
 Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu Lys Asp
 2965 2970 2975
 Asp Gly Arg Thr Cys Ala Asp Leu Asp Glu Cys Ser Thr Thr Phe Pro
 2980 2985 2990
 Cys Ser Gln Leu Cys Ile Asn Thr His Gly Ser Tyr Lys Cys Leu Cys
 2995 3000 3005
 Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro His Ser Cys Lys Ala
 3010 3015 3020
 Val Thr Asp Glu Glu Pro Phe Leu Ile Phe Ala Asn Arg Tyr Tyr Leu
 025 3030 3035 3040
 Arg Lys Leu Asn Leu Asp Gly Ser Asn Tyr Thr Leu Leu Lys Gln Gly
 3045 3050 3055
 Leu Asn Asn Ala Val Ala Leu Ala Phe Asp Tyr Arg Glu Gln Met Ile
 3060 3065 3070
 Tyr Trp Thr Gly Val Thr Thr Gln Gly Ser Met Ile Arg Arg Met His
 3075 3080 3085
 Leu Asn Gly Ser Asn Val Gln Val Leu His Arg Thr Gly Leu Ser Asn
 3090 3095 3100
 Pro Asp Gly Leu Ala Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys
 105 3110 3115 3120
 Asp Lys Gly Arg Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr
 3125 3130 3135
 Arg Thr Val Leu Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val
 3140 3145 3150
 Val Asp Val Gln Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His
 3155 3160 3165
 Ser Leu Ile Gly Arg Ile Gly Met Asp Gly Ser Gly Arg Ser Ile Ile
 3170 3175 3180
 Val Asp Thr Lys Ile Thr Trp Pro Asn Gly Leu Thr Val Asp Tyr Val
 185 3190 3195 3200
 Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile Glu Phe
 3205 3210 3215
 Ala Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser Gln Asp Ile
 3220 3225 3230
 Pro His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr Val Tyr Trp Thr
 3235 3240 3245
 Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala His Lys Thr Thr Gly Ala
 3250 3255 3260
 Asn Lys Thr Leu Leu Ile Ser Thr Leu His Arg Pro Met Asp Leu His
 265 3270 3275 3280
 Val Phe His Ala Leu Arg Gln Pro Asp Val Pro Asn His Pro Cys Lys

FIG. 12B

3285 3290 3295
 Val Asn Asn Gly Gly Cys Ser Asn Leu Cys Leu Leu Ser Pro Gly Gly
 3300 3305 3310
 Gly His Lys Cys Ala Cys Pro Thr Asn Phe Tyr Leu Gly Gly Asp Gly
 3315 3320 3325
 Arg Thr Cys Val Ser Asn Cys Thr Ala Ser Gln Phe Val Cys Lys Asn
 3330 3335 3340
 Asp Lys Cys Ile Pro Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys
 345 3350 3355 3360
 Gly Asp His Ser Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg
 3365 3370 3375
 Pro Gly Gln Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe
 3380 3385 3390
 Ile Cys Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn
 3395 3400 3405
 Cys Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr
 3410 3415 3420
 Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn Cys
 425 3430 3435 3440
 Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro Glu Val Thr Cys Ala Pro
 3445 3450 3455
 Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg Cys Ile Pro Arg Val Trp
 3460 3465 3470
 Val Cys Asp Arg Asp Asn His Cys Val Asp Gly Ser Asp Glu Pro Ala
 3475 3480 3485
 Asn Cys Thr Gln Met Thr Cys Gly Val Asp Glu Phe Arg Cys Lys Asp
 3490 3495 3500
 Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys Cys Asp Gly Glu Asp Asp
 505 3510 3515 3520
 Cys Gly Asp Gly Ser Asp Glu Pro Lys Glu Glu Cys Asp Glu Arg Thr
 3525 3530 3535
 Cys Glu Pro Tyr Gln Phe Arg Cys Lys Asn Asn Arg Cys Val Pro Gly
 3540 3545 3550
 Arg Trp Gln Cys Asp Tyr Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
 3555 3560 3565
 Glu Ser Cys Thr Pro Arg Pro Cys Ser Glu Ser Glu Phe Phe Cys Ala
 3570 3575 3580
 Asn Gly Arg Cys Ile Ala Gly Arg Trp Lys Cys Asp Gly Asp His Asp
 585 3590 3595 3600
 Cys Ala Asp Gly Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met
 3605 3610 3615
 Asp Gln Phe Gln Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Pro
 3620 3625 3630
 Cys Asp Ala Asp Ala Asp Cys Met Asp Gly Ser Asp Glu Glu Ala Cys
 3635 3640 3645
 Gly Thr Gly Val Arg Thr Cys Pro Leu Asp Glu Phe Gln Cys Asn Asn
 3650 3655 3660
 Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys Asp Gly Glu Asp Asp Cys
 665 3670 3675 3680
 Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu Cys Ala Arg Phe Ile Cys
 3685 3690 3695
 Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn Asp Arg Val Cys Leu Trp
 3700 3705 3710
 Ile Gly Arg Gln Cys Asp Gly Val Asp Asn Cys Gly Asp Gly Thr Asp
 3715 3720 3725
 Glu Glu Asp Cys Glu Pro Pro Thr Ala Gln Asn Pro His Cys Lys Asp
 3730 3735 3740
 Lys Lys Glu Phe Leu Cys Arg Asn Gln Arg Cys Leu Ser Ser Ser Leu
 745 3750 3755 3760

FIG. 12B

Arg Cys Asn Met Phe Asp Asp Cys Gly Asp Gly Ser Asp Glu Glu Asp
 3765 3770 3775
 Cys Ser Ile Asp Pro Lys Leu Thr Ser Cys Ala Thr Asn Ala Ser Met
 3780 3785 3790
 Cys Gly Asp Glu Ala Arg Cys Val Arg Thr Glu Lys Ala Ala Tyr Cys
 3795 3800 3805
 Ala Cys Arg Ser Gly Phe His Thr Val Pro Gly Gln Pro Gly Cys Gln
 3810 3815 3820
 Asp Ile Asn Glu Cys Leu Arg Phe Gly Thr Cys Ser Gln Leu Trp Asn
 825 3830 3835 3840
 Lys Pro Lys Gly Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys
 3845 3850 3855
 Thr His Asn Thr Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr
 3860 3865 3870
 Ile Ala Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His
 3875 3880 3885
 Ser Ala Tyr Glu Gln Thr Phe Gln Gly Asp Glu Ser Val Arg Ile Asp
 3890 3895 3900
 Ala Met Asp Val His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn Trp
 905 3910 3915 3920
 His Thr Gly Thr Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala Pro Pro
 3925 3930 3935
 Thr Thr Ser Asn Arg His Arg Arg Gln Ile Asp Arg Gly Val Thr His
 3940 3945 3950
 Leu Asn Ile Ser Gly Leu Lys Met Pro Arg Gly Ile Ala Ile Asp Trp
 3955 3960 3965
 Val Ala Gly Asn Val Tyr Trp Thr Asp Ser Gly Arg Asp Val Ile Glu
 3970 3975 3980
 Val Ala Gln Met Lys Gly Glu Asn Arg Lys Thr Leu Ile Ser Gly Met
 985 3990 3995 4000
 Ile Asp Glu Pro His Ala Ile Val Val Asp Pro Leu Arg Gly Thr Met
 4005 4010 4015
 Tyr Trp Ser Asp Trp Gly Asn His Pro Lys Ile Glu Thr Ala Ala Met
 4020 4025 4030
 Asp Gly Thr Leu Arg Glu Thr Leu Val Gln Asp Asn Ile Gln Trp Pro
 4035 4040 4045
 Thr Gly Leu Ala Val Asp Tyr His Asn Glu Arg Leu Tyr Trp Ala Asp
 4050 4055 4060
 Ala Lys Leu Ser Val Ile Gly Ser Ile Arg Leu Asn Gly Thr Asp Pro
 065 4070 4075 4080
 Ile Val Ala Ala Asp Ser Lys Arg Gly Leu Ser His Pro Phe Ser Ile
 4085 4090 4095
 Asp Val Phe Glu Asp Tyr Ile Tyr Gly Val Thr Tyr Ile Asn Asn Arg
 4100 4105 4110
 Val Phe Lys Ile His Lys Phe Gly His Ser Pro Leu Tyr Asn Leu Thr
 4115 4120 4125
 Gly Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys
 4130 4135 4140
 Gln Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp Leu
 145 4150 4155 4160
 Cys Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn Gly Lys
 4165 4170 4175
 Arg Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro Thr Pro Pro
 4180 4185 4190
 Pro Asp Ala Pro Arg Pro Gly Thr Cys Thr Leu Gln Cys Phe Asn Gly
 4195 4200 4205
 Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln Pro Lys Cys Arg Cys Gln
 4210 4215 4220
 Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu Asp Gln Cys Trp Glu Tyr

FIG. 12B

225 4230 4235 4240
 Cys His Asn Gly Gly Thr Cys Ala Ala Ser Pro Ser Gly Met Pro Thr
 4245 4250 4255
 Cys Arg Cys Pro Thr Gly Phe Thr Gly Pro Lys Cys Thr Ala Gln Val
 4260 4265 4270
 Cys Ala Gly Tyr Cys Ser Asn Asn Ser Thr Cys Thr Val Asn Gln Gly
 4275 4280 4285
 Asn Gln Pro Gln Cys Arg Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys
 4290 4295 4300
 Gln Tyr Arg Gln Cys Ser Gly Phe Cys Glu Asn Phe Gly Thr Cys Gln
 305 4310 4315 4320
 Met Ala Ala Asp Gly Ser Arg Gln Cys Arg Cys Thr Val Tyr Phe Glu
 4325 4330 4335
 Gly Pro Arg Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Gln Gly Ala
 4340 4345 4350
 Cys Val Val Asn Lys Gln Thr Gly Asp Val Thr Cys Asn Cys Thr Asp
 4355 4360 4365
 Gly Arg Val Ala Pro Ser Cys Leu Thr Cys Ile Asp His Cys Ser Asn
 4370 4375 4380
 Gly Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln Cys
 385 4390 4395 4400
 Pro Pro His Met Thr Gly Pro Arg Cys Gln Glu Gln Val Val Ser Gln
 4405 4410 4415
 Gln Gln Pro Gly His Met Ala Ser Ile Leu Ile Pro Leu Leu Leu Leu
 4420 4425 4430
 Leu Leu Leu Leu Leu Val Ala Gly Val Val Phe Trp Tyr Lys Arg Arg
 4435 4440 4445
 Val Arg Gly Ala Lys Gly Phe Gln His Gln Arg Met Thr Asn Gly Ala
 4450 4455 4460
 Met Asn Val Glu Ile Gly Asn Pro Thr Tyr Lys Met Tyr Glu Gly Gly
 465 4470 4475 4480
 Glu Pro Asp Asp Val Gly Gly Leu Leu Asp Ala Asp Phe Ala Leu Asp
 4485 4490 4495
 Pro Asp Lys Pro Thr Asn Phe Thr Asn Pro Val Tyr Ala Thr Leu Tyr
 4500 4505 4510
 Met Gly Gly His Gly Ser Arg His Ser Leu Ala Ser Thr Asp Glu Lys
 4515 4520 4525
 Arg Glu Leu Leu Gly Arg Gly Pro Glu Asp Glu Ile Gly Asp Pro Leu
 4530 4535 4540
 Ala
 545

FIG. 12B

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GCTACAATCC	ATCTGGTCTC	CTCCAGCTCC	TTCTTTCTGC	AAC	ATG	GGG	AAG	AAC									55
					Met	Gly	Lys	Asn									
					1												
AAA	CTC	CTT	CAT	CCA	AGT	CTG	GTT	CTT	CTC	CTC	TTG	GTC	CTC	CTG	CCC		103
Lys	Leu	Leu	His	Pro	Ser	Leu	Val	Leu	Leu	Leu	Leu	Val	Leu	Leu	Pro		
5					10					15					20		
ACA	GAC	GCC	TCA	GTC	TCT	GGA	AAA	CCG	CAG	TAT	ATG	GTT	CTG	GTC	CCC		151
Thr	Asp	Ala	Ser	Val	Ser	Gly	Lys	Pro	Gln	Tyr	Met	Val	Leu	Val	Pro		
				25					30						35		
TCC	CTG	CTC	CAC	ACT	GAG	ACC	ACT	GAG	AAG	GGC	TGT	GTC	CTT	CTG	AGC		199
Ser	Leu	Leu	His	Thr	Glu	Thr	Thr	Glu	Lys	Gly	Cys	Val	Leu	Leu	Ser		
			40					45						50			
TAC	CTG	AAT	GAG	ACA	GTG	ACT	GTA	AGT	GCT	TCC	TTG	GAG	TCT	GTC	AGG		247
Tyr	Leu	Asn	Glu	Thr	Val	Thr	Val	Ser	Ala	Ser	Leu	Glu	Ser	Val	Arg		
		55					60					65					
GGA	AAC	AGG	AGC	CTC	TTC	ACT	GAC	CTG	GAG	GCG	GAG	AAT	GAC	GTA	CTC		295
Gly	Asn	Arg	Ser	Leu	Phe	Thr	Asp	Leu	Glu	Ala	Glu	Asn	Asp	Val	Leu		
	70					75					80						
CAC	TGT	GTC	GCC	TTC	GCT	GTC	CCA	AAG	TCT	TCA	TCC	AAT	GAG	GAG	GTA		343
His	Cys	Val	Ala	Phe	Ala	Val	Pro	Lys	Ser	Ser	Ser	Asn	Glu	Glu	Val		
85					90					95					100		
ATG	TTC	CTC	ACT	GTC	CAA	GTG	AAA	GGA	CCA	ACC	CAA	GAA	TTT	AAG	AAG		391
Met	Phe	Leu	Thr	Val	Gln	Val	Lys	Gly	Pro	Thr	Gln	Glu	Phe	Lys	Lys		
				105				110						115			
CGG	ACC	ACA	GTG	ATG	GTT	AAG	AAC	GAG	GAC	AGT	CTG	GTC	TTT	GTC	CAG		439
Arg	Thr	Thr	Val	Met	Val	Lys	Asn	Glu	Asp	Ser	Leu	Val	Phe	Val	Gln		
			120					125					130				
ACA	GAC	AAA	TCA	ATC	TAC	AAA	CCA	GGG	CAG	ACA	GTG	AAA	TTT	CGT	GTT		487
Thr	Asp	Lys	Ser	Ile	Tyr	Lys	Pro	Gly	Gln	Thr	Val	Lys	Phe	Arg	Val		
		135					140					145					
GTC	TCC	ATG	GAT	GAA	AAC	TTT	CAC	CCC	CTG	AAT	GAG	TTG	ATT	CCA	CTA		535
Val	Ser	Met	Asp	Glu	Asn	Phe	His	Pro	Leu	Asn	Glu	Leu	Ile	Pro	Leu		
	150					155					160						
GTA	TAC	ATT	CAG	GAT	CCC	AAA	GGA	AAT	CGC	ATC	GCA	CAA	TGG	CAG	AGT		583
Val	Tyr	Ile	Gln	Asp	Pro	Lys	Gly	Asn	Arg	Ile	Ala	Gln	Trp	Gln	Ser		
165					170			175							180		
TTC	CAG	TTA	GAG	GGT	GGC	CTC	AAG	CAA	TTT	TCT	TTT	CCC	CTC	TCA	TCA		631
Phe	Gln	Leu	Glu	Gly	Gly	Leu	Lys	Gln	Phe	Ser	Phe	Pro	Leu	Ser	Ser		
				185				190						195			
GAG	CCC	TTC	CAG	GGC	TCC	TAC	AAG	GTG	GTG	GTA	CAG	AAG	AAA	TCA	GGT		679
Glu	Pro	Phe	Gln	Gly	Ser	Tyr	Lys	Val	Val	Val	Gln	Lys	Lys	Ser	Gly		
			200					205					210				
GGA	AGG	ACA	GAG	CAC	CCT	TTC	ACC	GTG	GAG	GAA	TTT	GTT	CTT	CCC	AAG		727

FIG. 13A

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(Sheet 52 of 91)

Gly	Arg	Thr	Glu	His	Pro	Phe	Thr	Val	Glu	Glu	Phe	Val	Leu	Pro	Lys	
		215					220					225				
TTT	GAA	GTA	CAA	GTA	ACA	GTG	CCA	AAG	ATA	ATC	ACC	ATC	TTG	GAA	GAA	775
Phe	Glu	Val	Gln	Val	Thr	Val	Pro	Lys	Ile	Ile	Thr	Ile	Leu	Glu	Glu	
	230					235					240					
GAG	ATG	AAT	GTA	TCA	GTG	TGT	GGC	CTA	TAC	ACA	TAT	GGG	AAG	CCT	GTC	823
Glu	Met	Asn	Val	Ser	Val	Cys	Gly	Leu	Tyr	Thr	Tyr	Gly	Lys	Pro	Val	
	245				250					255					260	
CCT	GGA	CAT	GTG	ACT	GTG	AGC	ATT	TGC	AGA	AAG	TAT	AGT	GAC	GCT	TCC	871
Pro	Gly	His	Val	Thr	Val	Ser	Ile	Cys	Arg	Lys	Tyr	Ser	Asp	Ala	Ser	
				265					270					275		
GAC	TGC	CAC	GGT	GAA	GAT	TCA	CAG	GCT	TTC	TGT	GAG	AAA	TTC	AGT	GGA	919
Asp	Cys	His	Gly	Glu	Asp	Ser	Gln	Ala	Phe	Cys	Glu	Lys	Phe	Ser	Gly	
			280					285					290			
CAG	CTA	AAC	AGC	CAT	GGC	TGC	TTC	TAT	CAG	CAA	GTA	AAA	ACC	AAG	GTC	967
Gln	Leu	Asn	Ser	His	Gly	Cys	Phe	Tyr	Gln	Gln	Val	Lys	Thr	Lys	Val	
		295				300						305				
TTC	CAG	CTG	AAG	AGG	AAG	GAG	TAT	GAA	ATG	AAA	CTT	CAC	ACT	GAG	GCC	1015
Phe	Gln	Leu	Lys	Arg	Lys	Glu	Tyr	Glu	Met	Lys	Leu	His	Thr	Glu	Ala	
	310					315					320					
CAG	ATC	CAA	GAA	GAA	GGA	ACA	GTG	GTG	GAA	TTG	ACT	GGA	AGG	CAG	TCC	1063
Gln	Ile	Gln	Glu	Glu	Gly	Thr	Val	Val	Glu	Leu	Thr	Gly	Arg	Gln	Ser	
	325				330					335					340	
AGT	GAA	ATC	ACA	AGA	ACC	ATA	ACC	AAA	CTC	TCA	TTT	GTG	AAA	GTG	GAC	1111
Ser	Glu	Ile	Thr	Arg	Thr	Ile	Thr	Lys	Leu	Ser	Phe	Val	Lys	Val	Asp	
				345					350					355		
TCA	CAC	TTT	CGA	CAG	GGA	ATT	CCC	TTC	TTT	GGG	CAG	GTG	CGC	CTA	GTA	1159
Ser	His	Phe	Arg	Gln	Gly	Ile	Pro	Phe	Phe	Gly	Gln	Val	Arg	Leu	Val	
			360				365						370			
GAT	GGG	AAA	GGC	GTC	CCT	ATA	CCA	AAT	AAA	GTC	ATA	TTC	ATC	AGA	GGA	1207
Asp	Gly	Lys	Gly	Val	Pro	Ile	Pro	Asn	Lys	Val	Ile	Phe	Ile	Arg	Gly	
		375					380					385				
AAT	GAA	GCA	AAC	TAT	TAC	TCC	AAT	GCT	ACC	ACG	GAT	GAG	CAT	GGC	CTT	1255
Asn	Glu	Ala	Asn	Tyr	Tyr	Ser	Asn	Ala	Thr	Thr	Asp	Glu	His	Gly	Leu	
	390					395					400					
GTA	CAG	TTC	TCT	ATC	AAC	ACC	ACC	AAC	GTT	ATG	GGT	ACC	TCT	CTT	ACT	1303
Val	Gln	Phe	Ser	Ile	Asn	Thr	Thr	Asn	Val	Met	Gly	Thr	Ser	Leu	Thr	
	405				410				415						420	
GTT	AGG	GTC	AAT	TAC	AAG	GAT	CGT	AGT	CCC	TGT	TAC	GGC	TAC	CAG	TGG	1351
Val	Arg	Val	Asn	Tyr	Lys	Asp	Arg	Ser	Pro	Cys	Tyr	Gly	Tyr	Gln	Trp	
				425					430					435		
GTG	TCA	GAA	GAA	CAC	GAA	GAG	GCA	CAT	CAC	ACT	GCT	TAT	CTT	GTG	TTC	1399
Val	Ser	Glu	Glu	His	Glu	Glu	Ala	His	His	Thr	Ala	Tyr	Leu	Val	Phe	
			440				445						450			

FIG. 13A

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TCC	CCA	AGC	AAG	AGC	TTT	GTC	CAC	CTT	GAG	CCC	ATG	TCT	CAT	GAA	CTA	1447
Ser	Pro	Ser	Lys	Ser	Phe	Val	His	Leu	Glu	Pro	Met	Ser	His	Glu	Leu	
		455					460					465				
CCC	TGT	GGC	CAT	ACT	CAG	ACA	GTC	CAG	GCA	CAT	TAT	ATT	CTG	AAT	GGA	1495
Pro	Cys	Gly	His	Thr	Gln	Thr	Val	Gln	Ala	His	Tyr	Ile	Leu	Asn	Gly	
	470					475					480					
GGC	ACC	CTG	CTG	GGG	CTG	AAG	AAG	CTC	TCC	TTT	TAT	TAT	CTG	ATA	ATG	1543
Gly	Thr	Leu	Leu	Gly	Leu	Lys	Lys	Leu	Ser	Phe	Tyr	Tyr	Leu	Ile	Met	
485					490					495					500	
GCA	AAG	GGA	GGC	ATT	GTC	CGA	ACT	GGG	ACT	CAT	GGA	CTG	CTT	GTG	AAG	1591
Ala	Lys	Gly	Gly	Ile	Val	Arg	Thr	Gly	Thr	His	Gly	Leu	Leu	Val	Lys	
				505					510					515		
CAG	GAA	GAC	ATG	AAG	GGC	CAT	TTT	TCC	ATC	TCA	ATC	CCT	GTG	AAG	TCA	1639
Gln	Glu	Asp	Met	Lys	Gly	His	Phe	Ser	Ile	Ser	Ile	Pro	Val	Lys	Ser	
			520					525					530			
GAC	ATT	GCT	CCT	GTC	GCT	CGG	TTG	CTC	ATC	TAT	GCT	GTT	TTA	CCT	ACC	1687
Asp	Ile	Ala	Pro	Val	Ala	Arg	Leu	Leu	Ile	Tyr	Ala	Val	Leu	Pro	Thr	
		535					540					545				
GGG	GAC	GTG	ATT	GGG	GAT	TCT	GCA	AAA	TAT	GAT	GTT	GAA	AAT	TGT	CTG	1735
Gly	Asp	Val	Ile	Gly	Asp	Ser	Ala	Lys	Tyr	Asp	Val	Glu	Asn	Cys	Leu	
	550					555					560					
GCC	AAC	AAG	GTG	GAT	TTG	AGC	TTC	AGC	CCA	TCA	CAA	AGT	CTC	CCA	GCC	1783
Ala	Asn	Lys	Val	Asp	Leu	Ser	Phe	Ser	Pro	Ser	Gln	Ser	Leu	Pro	Ala	
565					570				575						580	
TCA	CAC	GCC	CAC	CTG	CGA	GTC	ACA	GCG	GCT	CCT	CAG	TCC	GTC	TGC	GCC	1831
Ser	His	Ala	His	Leu	Arg	Val	Thr	Ala	Ala	Pro	Gln	Ser	Val	Cys	Ala	
				585				590						595		
CTC	CGT	GCT	GTG	GAC	CAA	AGC	GTG	CTG	CTC	ATG	AAG	CCT	GAT	GCT	GAG	1879
Leu	Arg	Ala	Val	Asp	Gln	Ser	Val	Leu	Leu	Met	Lys	Pro	Asp	Ala	Glu	
			600				605						610			
CTC	TCG	GCG	TCC	TCG	GTT	TAC	AAC	CTG	CTA	CCA	GAA	AAG	GAC	CTC	ACT	1927
Leu	Ser	Ala	Ser	Ser	Val	Tyr	Asn	Leu	Leu	Pro	Glu	Lys	Asp	Leu	Thr	
		615					620					625				
GGC	TTC	CCT	GGG	CCT	TTG	AAT	GAC	CAG	GAC	GAT	GAA	GAC	TGC	ATC	AAT	1975
Gly	Phe	Pro	Gly	Pro	Leu	Asn	Asp	Gln	Asp	Asp	Glu	Asp	Cys	Ile	Asn	
	630					635					640					
CGT	CAT	AAT	GTC	TAT	ATT	AAT	GGA	ATC	ACA	TAT	ACT	CCA	GTA	TCA	AGT	2023
Arg	His	Asn	Val	Tyr	Ile	Asn	Gly	Ile	Thr	Tyr	Thr	Pro	Val	Ser	Ser	
645					650				655						660	
ACA	AAT	GAA	AAG	GAT	ATG	TAC	AGC	TTC	CTA	GAG	GAC	ATG	GGC	TTA	AAG	2071
Thr	Asn	Glu	Lys	Asp	Met	Tyr	Ser	Phe	Leu	Glu	Asp	Met	Gly	Leu	Lys	
				665					670					675		
GCA	TTC	ACC	AAC	TCA	AAG	ATT	CGT	AAA	CCC	AAA	ATG	TGT	CCA	CAG	CTT	2119
Ala	Phe	Thr	Asn	Ser	Lys	Ile	Arg	Lys	Pro	Lys	Met	Cys	Pro	Gln	Leu	
			680				685						690			

FIG. 13A

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CAA Gln	CAG Gln	TAT Tyr 695	GAA Glu	ATG Met	CAT His	GGA Gly	CCT Pro 700	GAA Glu	GGT Gly	CTA Leu	CGT Arg	GTA Val 705	GGT Gly	TTT Phe	TAT Tyr	2167
GAG Glu 710	TCA Ser	GAT Asp	GTA Val	ATG Met	GGA Gly	AGA Arg 715	GGC Gly	CAT His	GCA Ala	CGC Arg	CTG Leu 720	GTG Val	CAT His	GTT Val	GAA Glu	2215
GAG Glu 725	CCT Pro	CAC His	ACG Thr	GAG Glu	ACC Thr 730	GTA Val	CGA Arg	AAG Lys	TAC Tyr	TTC Phe 735	CCT Pro	GAG Glu	ACA Thr	TGG Trp	ATC Ile 740	2263
TGG Trp	GAT Asp	TTG Leu	GTG Val 745	GTG Val	GTA Val	AAC Asn	TCA Ser	GCA Ala	GGG Gly 750	GTG Val	GCT Ala	GAG Glu	GTA Val	GGA Gly 755	GTA Val	2311
ACA Thr	GTC Val	CCT Pro	GAC Asp 760	ACC Thr	ATC Ile	ACC Thr	GAG Glu 765	TGG Trp	AAG Lys	GCA Ala	GGG Gly	GCC Ala	TTC Phe 770	TGC Cys	CTG Leu	2359
TCT Ser	GAA Glu	GAT Asp 775	GCT Ala	GGA Gly	CTT Leu	GGT Gly	ATC Ile 780	TCT Ser	TCC Ser	ACT Thr	GCC Ala	TCT Ser 785	CTC Leu	CGA Arg	GCC Ala	2407
TTC Phe 790	CAG Gln	CCC Pro	TTC Phe	TTT Phe	GTG Val	GAG Glu 795	CTT Leu	ACA Thr	ATG Met	CCT Pro	TAC Tyr 800	TCT Ser	GTG Val	ATT Ile	CGT Arg	2455
GGA Gly 805	GAG Glu	GCC Ala	TTC Phe	ACA Thr	CTC Leu 810	AAG Lys	GCC Ala	ACG Thr	GTC Val	CTA Leu 815	AAC Asn	TAC Tyr	CTT Leu	CCC Pro	AAA Lys 820	2503
TGC Cys	ATC Ile	CGG Arg	GTC Val 825	AGT Ser	GTG Val	CAG Gln	CTG Leu	GAA Glu	GCC Ala 830	TCT Ser	CCC Pro	GCC Ala	TTC Phe	CTT Leu 835	GCT Ala	2551
GTC Val	CCA Pro	GTG Val	GAG Glu 840	AAG Lys	GAA Glu	CAA Gln	GCG Ala	CCT Pro 845	CAC His	TGC Cys	ATC Ile	TGT Cys	GCA Ala 850	AAC Asn	GGG Gly	2599
CGG Arg	CAA Gln	ACT Thr 855	GTG Val	TCC Ser	TGG Trp	GCA Ala	GTA Val 860	ACC Thr	CCA Pro	AAG Lys	TCA Ser	TTA Leu 865	GGA Gly	AAT Asn	GTG Val	2647
AAT Asn 870	TTC Phe	ACT Thr	GTG Val	AGC Ser	GCA Ala	GAG Glu 875	GCA Ala	CTA Leu	GAG Glu	TCT Ser	CAA Gln 880	GAG Glu	CTG Leu	TGT Cys	GGG Gly	2695
ACT Thr 885	GAG Glu	GTG Val	CCT Pro	TCA Ser	GTT Val 890	CCT Pro	GAA Glu	CAC His	GGA Gly	AGG Arg 895	AAA Lys	GAC Asp	ACA Thr	GTC Val	ATC Ile 900	2743
AAG Lys	CCT Pro	CTG Leu	TTG Leu	GTT Val 905	GAA Glu	CCT Pro	GAA Glu	GGA Gly	CTA Leu 910	GAG Glu	AAG Lys	GAA Glu	ACA Thr	ACA Thr 915	TTC Phe	2791
AAC Asn	TCC Ser	CTA Leu	CTT Leu 920	TGT Cys	CCA Pro	TCA Ser	GGT Gly	GGT Gly 925	GAG Glu	GTT Val	TCT Ser	GAA Glu	GAA Glu	TTA Leu	TCC Ser	2839

FIG. 13A

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CTG	AAA	CTG	CCA	CCA	AAT	GTG	GTA	GAA	GAA	TCT	GCC	CGA	GCT	TCT	GTC	2887
Leu	Lys	Leu	Pro	Pro	Asn	Val	Val	Glu	Glu	Ser	Ala	Arg	Ala	Ser	Val	
		935					940					945				
TCA	GTT	TTG	GGA	GAC	ATA	TTA	GGC	TCT	GCC	ATG	CAA	AAC	ACA	CAA	AAT	2935
Ser	Val	Leu	Gly	Asp	Ile	Leu	Gly	Ser	Ala	Met	Gln	Asn	Thr	Gln	Asn	
	950					955					960					
CTT	CTC	CAG	ATG	CCC	TAT	GGC	TGT	GGA	GAG	CAG	AAT	ATG	GTC	CTC	TTT	2983
Leu	Leu	Gln	Met	Pro	Tyr	Gly	Cys	Gly	Glu	Gln	Asn	Met	Val	Leu	Phe	
	965				970					975					980	
GCT	CCT	AAC	ATC	TAT	GTA	CTG	GAT	TAT	CTA	AAT	GAA	ACA	CAG	CAG	CTT	3031
Ala	Pro	Asn	Ile	Tyr	Val	Leu	Asp	Tyr	Leu	Asn	Glu	Thr	Gln	Gln	Leu	
				985					990					995		
ACT	CCA	GAG	GTC	AAG	TCC	AAG	GCC	ATT	GGC	TAT	CTC	AAC	ACT	GGT	TAC	3079
Thr	Pro	Glu	Val	Lys	Ser	Lys	Ala	Ile	Gly	Tyr	Leu	Asn	Thr	Gly	Tyr	
		1000					1005					1010				
CAG	AGA	CAG	TTG	AAC	TAC	AAA	CAC	TAT	GAT	GGC	TCC	TAC	AGC	ACC	TTT	3127
Gln	Arg	Gln	Leu	Asn	Tyr	Lys	His	Tyr	Asp	Gly	Ser	Tyr	Ser	Thr	Phe	
	1015					1020					1025					
GGG	GAG	CGA	TAT	GGC	AGG	AAC	CAG	GGC	AAC	ACC	TGG	CTC	ACA	GCC	TTT	3175
Gly	Glu	Arg	Tyr	Gly	Arg	Asn	Gln	Gly	Asn	Thr	Trp	Leu	Thr	Ala	Phe	
	1030					1035					1040					
GTT	CTG	AAG	ACT	TTT	GCC	CAA	GCT	CGA	GCC	TAC	ATC	TTC	ATC	GAT	GAA	3223
Val	Leu	Lys	Thr	Phe	Ala	Gln	Ala	Arg	Ala	Tyr	Ile	Phe	Ile	Asp	Glu	
1045					1050					1055					1060	
GCA	CAC	ATT	ACC	CAA	GCC	CTC	ATA	TGG	CTC	TCC	CAG	AGG	CAG	AAG	GAC	3271
Ala	His	Ile	Thr	Gln	Ala	Leu	Ile	Trp	Leu	Ser	Gln	Arg	Gln	Lys	Asp	
				1065				1070					1075			
AAT	GGC	TGT	TTC	AGG	AGC	TCT	GGG	TCA	CTG	CTC	AAC	AAT	GCC	ATA	AAG	3319
Asn	Gly	Cys	Phe	Arg	Ser	Ser	Gly	Ser	Leu	Leu	Asn	Asn	Ala	Ile	Lys	
		1080					1085					1090				
GGA	GGA	GTA	GAA	GAT	GAA	GTG	ACC	CTC	TCC	GCC	TAT	ATC	ACC	ATC	GCC	3367
Gly	Gly	Val	Glu	Asp	Glu	Val	Thr	Leu	Ser	Ala	Tyr	Ile	Thr	Ile	Ala	
	1095					1100					1105					
CTT	CTG	GAG	ATT	CCT	CTC	ACA	GTC	ACT	CAC	CCT	GTT	GTC	CGC	AAT	GCC	3415
Leu	Leu	Glu	Ile	Pro	Leu	Thr	Val	Thr	His	Pro	Val	Val	Arg	Asn	Ala	
	1110					1115					1120					
CTG	TTT	TGC	CTG	GAG	TCA	GCC	TGG	AAG	ACA	GCA	CAA	GAA	GGG	GAC	CAT	3463
Leu	Phe	Cys	Leu	Glu	Ser	Ala	Trp	Lys	Thr	Ala	Gln	Glu	Gly	Asp	His	
1125					1130					1135					1140	
GGC	AGC	CAT	GTA	TAT	ACC	AAA	GCA	CTG	CTG	GCC	TAT	GCT	TTT	GCC	CTG	3511
Gly	Ser	His	Val	Tyr	Thr	Lys	Ala	Leu	Leu	Ala	Tyr	Ala	Phe	Ala	Leu	
				1145				1150					1155			
GCA	GGT	AAC	CAG	GAC	AAG	AGG	AAG	GAA	GTA	CTC	AAG	TCA	CTT	AAT	GAG	3559
Ala	Gly	Asn	Gln	Asp	Lys	Arg	Lys	Glu	Val	Leu	Lys	Ser	Leu	Asn	Glu	
		1160					1165					1170				

FIG. 13A

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GAA GCT GTG AAG AAA GAC AAC TCT GTC CAT TGG GAG CGC CCT CAG AAA Glu Ala Val Lys Lys Asp Asn Ser Val His Trp Glu Arg Pro Gln Lys 1175 1180 1185	3607
CCC AAG GCA CCA GTG GGG CAT TTT TAC GAA CCC CAG GCT CCC TCT GCT Pro Lys Ala Pro Val Gly His Phe Tyr Glu Pro Gln Ala Pro Ser Ala 1190 1195 1200	3655
GAG GTG GAG ATG ACA TCC TAT GTG CTC CTC GCT TAT CTC ACG GCC CAG Glu Val Glu Met Thr Ser Tyr Val Leu Leu Ala Tyr Leu Thr Ala Gln 1205 1210 1215 1220	3703
CCA GCC CCA ACC TCG GAG GAC CTG ACC TCT GCA ACC AAC ATC GTG AAG Pro Ala Pro Thr Ser Glu Asp Leu Thr Ser Ala Thr Asn Ile Val Lys 1225 1230 1235	3751
TGG ATC ACG AAG CAG CAG AAT GCC CAG GGC GGT TTC TCC TCC ACC CAG Trp Ile Thr Lys Gln Gln Asn Ala Gln Gly Gly Phe Ser Ser Thr Gln 1240 1245 1250	3799
GAC ACA GTG GTG GCT CTC CAT GCT CTG TCC AAA TAT GGA GCC GCC ACA Asp Thr Val Val Ala Leu His Ala Leu Ser Lys Tyr Gly Ala Ala Thr 1255 1260 1265	3847
TTT ACC AGG ACT GGG AAG GCT GCA CAG GTG ACT ATC CAG TCT TCA GGG Phe Thr Arg Thr Gly Lys Ala Ala Gln Val Thr Ile Gln Ser Ser Gly 1270 1275 1280	3895
ACA TTT TCC AGC AAA TTC CAA GTG GAC AAC AAC AAT CGC CTG TTA CTG Thr Phe Ser Ser Lys Phe Gln Val Asp Asn Asn Asn Arg Leu Leu Leu 1285 1290 1295 1300	3943
CAG CAG GTC TCA TTG CCA GAG CTG CCT GGG GAA TAC AGC ATG AAA GTG Gln Gln Val Ser Leu Pro Glu Leu Pro Gly Glu Tyr Ser Met Lys Val 1305 1310 1315	3991
ACA GGA GAA GGA TGT GTC TAC CTC CAG ACC TCC TTG AAA TAC AAT ATT Thr Gly Glu Gly Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn Ile 1320 1325 1330	4039
CTC CCA GAA AAG GAA GAG TTC CCC TTT GCT TTA GGA GTG CAG ACT CTG Leu Pro Glu Lys Glu Glu Phe Pro Phe Ala Leu Gly Val Gln Thr Leu 1335 1340 1345	4087
CCT CAA ACT TGT GAT GAA CCC AAA GCC CAC ACC AGC TTC CAA ATC TCC Pro Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile Ser 1350 1355 1360	4135
CTA AGT GTC AGT TAC ACA GGG AGC CGC TCT GCC TCC AAC ATG GCG ATC Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala Ile 1365 1370 1375 1380	4183
GTT GAT GTG AAG ATG GTC TCT GGC TTC ATT CCC CTG AAG CCA ACA GTG Val Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr Val 1385 1390 1395	4231
AAA ATG CTT GAA AGA TCT AAC CAT GTG AGC CGG ACA GAA GTC AGC AGC Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu Val Ser Ser 1400 1405 1410	4279

FIG. 13A

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AAC CAT GTC TTG ATT TAC CTT GAT AAG GTG TCA AAT CAG ACA CTG AGC	4327
Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln Thr Leu Ser	
1415 1420 1425	
TTG TTC TTC ACG GTT CTG CAA GAT GTC CCA GTA AGA GAT CTC AAA CCA	4375
Leu Phe Phe Thr Val Leu Gln Asp Val Pro Val Arg Asp Leu Lys Pro	
1430 1435 1440	
GCC ATA GTG AAA GTC TAT GAT TAC TAC GAG ACG GAT GAG TTT GCA ATC	4423
Ala Ile Val Lys Val Tyr Asp Tyr Tyr Glu Thr Asp Glu Phe Ala Ile	
1445 1450 1455 1460	
GCT GAG TAC AAT GCT CCT TGC AGC AAA GAT CTT GGA AAT GCT TGAAGACCA	4474
Ala Glu Tyr Asn Ala Pro Cys Ser Lys Asp Leu Gly Asn Ala	
1465 1470 1	
CAAGGCTGAA AAGTGCTTTG CTGGAGTCCT GTTCTCTGAG CTCCACAGAA GACACGTGTT	4534
TTTGTATCTT TAAAGACTTG ATGAATAAAC ACTTTTCTG GTC	4577

FIG. 13A

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(Sheet 58 of 91)

Ser Val Ser Gly Lys Pro Gln Tyr Met Val Leu Val Pro Ser Leu Leu
 1 5 10 15
 His Thr Glu Thr Thr Glu Lys Gly Cys Val Leu Leu Ser Tyr Leu Asn
 20 25 30
 Glu Thr Val Thr Val Ser Ala Ser Leu Glu Ser Val Arg Gly Asn Arg
 35 40 45
 Ser Leu Phe Thr Asp Leu Glu Ala Glu Asn Asp Val Leu His Cys Val
 50 55 60
 Ala Phe Ala Val Pro Lys Ser Ser Ser Asn Glu Glu Val Met Phe Leu
 65 70 75 80
 Thr Val Gln Val Lys Gly Pro Thr Gln Glu Phe Lys Lys Arg Thr Thr
 85 90 95
 Val Met Val Lys Asn Glu Asp Ser Leu Val Phe Val Gln Thr Asp Lys
 100 105 110
 Ser Ile Tyr Lys Pro Gly Gln Thr Val Lys Phe Arg Val Val Ser Met
 115 120 125
 Asp Glu Asn Phe His Pro Leu Asn Glu Leu Ile Pro Leu Val Tyr Ile
 130 135 140
 Gln Asp Pro Lys Gly Asn Arg Ile Ala Gln Trp Gln Ser Phe Gln Leu
 145 150 155 160
 Glu Gly Gly Leu Lys Gln Phe Ser Phe Pro Leu Ser Ser Glu Pro Phe
 165 170 175
 Gln Gly Ser Tyr Lys Val Val Val Gln Lys Lys Ser Gly Gly Arg Thr
 180 185 190
 Glu His Pro Phe Thr Val Glu Glu Phe Val Leu Pro Lys Phe Glu Val
 195 200 205
 Gln Val Thr Val Pro Lys Ile Ile Thr Ile Leu Glu Glu Glu Met Asn
 210 215 220
 Val Ser Val Cys Gly Leu Tyr Thr Tyr Gly Lys Pro Val Pro Gly His
 225 230 235 240
 Val Thr Val Ser Ile Cys Arg Lys Tyr Ser Asp Ala Ser Asp Cys His
 245 250 255
 Gly Glu Asp Ser Gln Ala Phe Cys Glu Lys Phe Ser Gly Gln Leu Asn
 260 265 270
 Ser His Gly Cys Phe Tyr Gln Gln Val Lys Thr Lys Val Phe Gln Leu
 275 280 285
 Lys Arg Lys Glu Tyr Glu Met Lys Leu His Thr Glu Ala Gln Ile Gln
 290 295 300
 Glu Glu Gly Thr Val Val Glu Leu Thr Gly Arg Gln Ser Ser Glu Ile
 305 310 315 320
 Thr Arg Thr Ile Thr Lys Leu Ser Phe Val Lys Val Asp Ser His Phe
 325 330 335
 Arg Gln Gly Ile Pro Phe Phe Gly Gln Val Arg Leu Val Asp Gly Lys
 340 345 350
 Gly Val Pro Ile Pro Asn Lys Val Ile Phe Ile Arg Gly Asn Glu Ala
 355 360 365
 Asn Tyr Tyr Ser Asn Ala Thr Thr Asp Glu His Gly Leu Val Gln Phe
 370 375 380
 Ser Ile Asn Thr Thr Asn Val Met Gly Thr Ser Leu Thr Val Arg Val
 385 390 395 400
 Asn Tyr Lys Asp Arg Ser Pro Cys Tyr Gly Tyr Gln Trp Val Ser Glu
 405 410 415
 Glu His Glu Glu Ala His His Thr Ala Tyr Leu Val Phe Ser Pro Ser
 420 425 430
 Lys Ser Phe Val His Leu Glu Pro Met Ser His Glu Leu Pro Cys Gly
 435 440 445
 His Thr Gln Thr Val Gln Ala His Tyr Ile Leu Asn Gly Gly Thr Leu
 450 455 460
 Leu Gly Leu Lys Lys Leu Ser Phe Tyr Tyr Leu Ile Met Ala Lys Gly

FIG. 13B

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(Sheet 59 of 91)

465	Gly	Ile	Val	Arg	Thr	470	Gly	Thr	His	Gly	Leu	475	Leu	Val	Lys	Gln	Glu	480	Asp
					485						490						495		
Met	Lys	Gly	His	Phe	Ser	Ile	Ser	Ile	Pro	Val	Lys	Ser	Asp	Ile	Ala				
			500					505								510			
Pro	Val	Ala	Arg	Leu	Leu	Ile	Tyr	Ala	Val	Leu	Pro	Thr	Gly	Asp	Val				
		515					520									525			
Ile	Gly	Asp	Ser	Ala	Lys	Tyr	Asp	Val	Glu	Asn	Cys	Leu	Ala	Asn	Lys				
	530					535					540								
Val	Asp	Leu	Ser	Phe	Ser	Pro	Ser	Gln	Ser	Leu	Pro	Ala	Ser	His	Ala				
545					550					555						560			
His	Leu	Arg	Val	Thr	Ala	Ala	Pro	Gln	Ser	Val	Cys	Ala	Leu	Arg	Ala				
				565						570						575			
Val	Asp	Gln	Ser	Val	Leu	Leu	Met	Lys	Pro	Asp	Ala	Glu	Leu	Ser	Ala				
			580					585								590			
Ser	Ser	Val	Tyr	Asn	Leu	Leu	Pro	Glu	Lys	Asp	Leu	Thr	Gly	Phe	Pro				
		595					600									605			
Gly	Pro	Leu	Asn	Asp	Gln	Asp	Asp	Glu	Asp	Cys	Ile	Asn	Arg	His	Asn				
	610					615					620								
Val	Tyr	Ile	Asn	Gly	Ile	Thr	Tyr	Thr	Pro	Val	Ser	Ser	Thr	Asn	Glu				
625					630					635						640			
Lys	Asp	Met	Tyr	Ser	Phe	Leu	Glu	Asp	Met	Gly	Leu	Lys	Ala	Phe	Thr				
				645					650							655			
Asn	Ser	Lys	Ile	Arg	Lys	Pro	Lys	Met	Cys	Pro	Gln	Leu	Gln	Gln	Tyr				
			660					665								670			
Glu	Met	His	Gly	Pro	Glu	Gly	Leu	Arg	Val	Gly	Phe	Tyr	Glu	Ser	Asp				
		675					680									685			
Val	Met	Gly	Arg	Gly	His	Ala	Arg	Leu	Val	His	Val	Glu	Glu	Pro	His				
	690					695										700			
Thr	Glu	Thr	Val	Arg	Lys	Tyr	Phe	Pro	Glu	Thr	Trp	Ile	Trp	Asp	Leu				
705					710					715						720			
Val	Val	Val	Asn	Ser	Ala	Gly	Val	Ala	Glu	Val	Gly	Val	Thr	Val	Pro				
			725						730							735			
Asp	Thr	Ile	Thr	Glu	Trp	Lys	Ala	Gly	Ala	Phe	Cys	Leu	Ser	Glu	Asp				
			740					745								750			
Ala	Gly	Leu	Gly	Ile	Ser	Ser	Thr	Ala	Ser	Leu	Arg	Ala	Phe	Gln	Pro				
		755					760									765			
Phe	Phe	Val	Glu	Leu	Thr	Met	Pro	Tyr	Ser	Val	Ile	Arg	Gly	Glu	Ala				
	770					775										780			
Phe	Thr	Leu	Lys	Ala	Thr	Val	Leu	Asn	Tyr	Leu	Pro	Lys	Cys	Ile	Arg				
785					790					795						800			
Val	Ser	Val	Gln	Leu	Glu	Ala	Ser	Pro	Ala	Phe	Leu	Ala	Val	Pro	Val				
			805						810							815			
Glu	Lys	Glu	Gln	Ala	Pro	His	Cys	Ile	Cys	Ala	Asn	Gly	Arg	Gln	Thr				
			820					825								830			
Val	Ser	Trp	Ala	Val	Thr	Pro	Lys	Ser	Leu	Gly	Asn	Val	Asn	Phe	Thr				
		835					840									845			
Val	Ser	Ala	Glu	Ala	Leu	Glu	Ser	Gln	Glu	Leu	Cys	Gly	Thr	Glu	Val				
	850					855					860								
Pro	Ser	Val	Pro	Glu	His	Gly	Arg	Lys	Asp	Thr	Val	Ile	Lys	Pro	Leu				
865					870					875						880			
Leu	Val	Glu	Pro	Glu	Gly	Leu	Glu	Lys	Glu	Thr	Thr	Phe	Asn	Ser	Leu				
			885						890							895			
Leu	Cys	Pro	Ser	Gly	Gly	Glu	Val	Ser	Glu	Glu	Leu	Ser	Leu	Lys	Leu				
			900					905								910			
Pro	Pro	Asn	Val	Val	Glu	Glu	Ser	Ala	Arg	Ala	Ser	Val	Ser	Val	Leu				
		915					920									925			
Gly	Asp	Ile	Leu	Gly	Ser	Ala	Met	Gln	Asn	Thr	Gln	Asn	Leu	Leu	Gln				
	930					935					940								

FIG. 13B

Met Pro Tyr Gly Cys Gly Glu Gln Asn Met Val Leu Phe Ala Pro Asn
 945 950 955 960
 Ile Tyr Val Leu Asp Tyr Leu Asn Glu Thr Gln Gln Leu Thr Pro Glu
 965 970 975
 Val Lys Ser Lys Ala Ile Gly Tyr Leu Asn Thr Gly Tyr Gln Arg Gln
 980 985 990
 Leu Asn Tyr Lys His Tyr Asp Gly Ser Tyr Ser Thr Phe Gly Glu Arg
 995 1000 1005
 Tyr Gly Arg Asn Gln Gly Asn Thr Trp Leu Thr Ala Phe Val Leu Lys
 1010 1015 1020
 Thr Phe Ala Gln Ala Arg Ala Tyr Ile Phe Ile Asp Glu Ala His Ile
 025 1030 1035 1040
 Thr Gln Ala Leu Ile Trp Leu Ser Gln Arg Gln Lys Asp Asn Gly Cys
 1045 1050 1055
 Phe Arg Ser Ser Gly Ser Leu Leu Asn Asn Ala Ile Lys Gly Gly Val
 1060 1065 1070
 Glu Asp Glu Val Thr Leu Ser Ala Tyr Ile Thr Ile Ala Leu Leu Glu
 1075 1080 1085
 Ile Pro Leu Thr Val Thr His Pro Val Val Arg Asn Ala Leu Phe Cys
 1090 1095 1100
 Leu Glu Ser Ala Trp Lys Thr Ala Gln Glu Gly Asp His Gly Ser His
 105 1110 1115 1120
 Val Tyr Thr Lys Ala Leu Leu Ala Tyr Ala Phe Ala Leu Ala Gly Asn
 1125 1130 1135
 Gln Asp Lys Arg Lys Glu Val Leu Lys Ser Leu Asn Glu Glu Ala Val
 1140 1145 1150
 Lys Lys Asp Asn Ser Val His Trp Glu Arg Pro Gln Lys Pro Lys Ala
 1155 1160 1165
 Pro Val Gly His Phe Tyr Glu Pro Gln Ala Pro Ser Ala Glu Val Glu
 1170 1175 1180
 Met Thr Ser Tyr Val Leu Leu Ala Tyr Leu Thr Ala Gln Pro Ala Pro
 185 1190 1195 1200
 Thr Ser Glu Asp Leu Thr Ser Ala Thr Asn Ile Val Lys Trp Ile Thr
 1205 1210 1215
 Lys Gln Gln Asn Ala Gln Gly Gly Phe Ser Ser Thr Gln Asp Thr Val
 1220 1225 1230
 Val Ala Leu His Ala Leu Ser Lys Tyr Gly Ala Ala Thr Phe Thr Arg
 1235 1240 1245
 Thr Gly Lys Ala Ala Gln Val Thr Ile Gln Ser Ser Gly Thr Phe Ser
 1250 1255 1260
 Ser Lys Phe Gln Val Asp Asn Asn Asn Arg Leu Leu Leu Gln Gln Val
 265 1270 1275 1280
 Ser Leu Pro Glu Leu Pro Gly Glu Tyr Ser Met Lys Val Thr Gly Glu
 1285 1290 1295
 Gly Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn Ile Leu Pro Glu
 1300 1305 1310
 Lys Glu Glu Phe Pro Phe Ala Leu Gly Val Gln Thr Leu Pro Gln Thr
 1315 1320 1325
 Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile Ser Leu Ser Val
 1330 1335 1340
 Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala Ile Val Asp Val
 345 1350 1355 1360
 Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr Val Lys Met Leu
 1365 1370 1375
 Glu Arg Ser Asn His Val Ser Arg Thr Glu Val Ser Ser Asn His Val
 1380 1385 1390
 Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln Thr Leu Ser Leu Phe Phe
 1395 1400 1405

FIG. 13B

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(Sheet 61 of 91)

Thr	Val	Leu	Gln	Asp	Val	Pro	Val	Arg	Asp	Leu	Lys	Pro	Ala	Ile	Val
1410					1415					1420					
Lys	Val	Tyr	Asp	Tyr	Tyr	Glu	Thr	Asp	Glu	Phe	Ala	Ile	Ala	Glu	Tyr
425					1430					1435					1440
Asn	Ala	Pro	Cys	Ser	Lys	Asp	Leu	Gly	Asn	Ala					
				1445					1450						

FIG. 13B

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(Sheet 62 of 91)

CAGCGGTGCG	AGCTCCAGGC	CCATGCACTG	AGGAGGCGGA	AACAAGGGGA	GCCCCCAGAG	60
CTCCATCAAG	CCCCCTCCAA	AGGCTCCCCT	ACCCGGTCCA	CGCCCCCCAC	CCCCCTCCC	120
CGCCTCCTCC	CAATTGTGCA	TTTTTGCAGC	CGGAGGCGGC	TCCGAGATGG	GGCTGTGAGC	180
TTCGCCCCGGG	GAGGGGGAAA	GAGCAGCGAG	GAGTGAAGCG	GGGGGGTGGG	GTGAAGGGTT	240
TGGATTTTCGG	GGCAGGGGGC	GCACCCCCGT	CAGCAGGCCC	TCCCCAAGGG	GCTCGGAACT	300
CTACCTCTTC	ACCCACGCCC	CTGGTGCCT	TTGCCGAAGG	AAAGAATAAG	AACAGAGAAG	360
GAGGAGGGGG	AAAGGAGGAA	AAGGGGGACC	CCCCAACTGG	GGGGGGTGAA	GGAGAGAAGT	420
AGCAGGACCA	GAGGGGAAGG	GGCTGCTGCT	TGCATCAGCC	CACACC	ATG CTG ACC	475
					Met Leu Thr	
					1	
CCG CCG TTG CTC CTG CTG CTG CCC CTG CTC TCA GCT CTG GTC GCG GCG	523					
Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu Val Ala Ala						
5 10 15						
GCT ATC GAC GCC CCT AAG ACT TGC AGC CCC AAG CAG TTT GCC TGC AGA	571					
Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe Ala Cys Arg						
20 25 30 35						
GAT CAA ATA ACC TGT ATC TCA AAG GGC TGG CGG TGC GAC GGT GAG AGG	619					
Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp Gly Glu Arg						
40 45 50						
GAC TGC CCA GAC GGA TCT GAC GAG GCC CCT GAG ATT TGT CCA CAG AGT	667					
Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys Pro Gln Ser						
55 60 65						
AAG GCC CAG CGA TGC CAG CCA AAC GAG CAT AAC TGC CTG GGT ACT GAG	715					
Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu Gly Thr Glu						
70 75 80						
CTG TGT GTT CCC ATG TCC CGC CTC TGC AAT GGG GTC CAG GAC TGC ATG	763					
Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln Asp Cys Met						
85 90 95						
GAC GGC TCA GAT GAG GGG CCC CAC TGC CGA GAG CTC CAA GGC AAC TGC	811					
Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln Gly Asn Cys						
100 105 110 115						
TCT CGC CTG GGC TGC CAG CAC CAT TGT GTC CCC ACA CTC GAT GGG CCC	859					
Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu Asp Gly Pro						
120 125 130						
ACC TGC TAC TGC AAC AGC AGC TTT CAG CTT CAG GCA GAT GGC AAG ACC	907					
Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp Gly Lys Thr						
135 140 145						
TGC AAA GAT TTT GAT GAG TGC TCA GTG TAC GGC ACC TGC AGC CAG CTA	955					
Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys Ser Gln Leu						
150 155 160						
TGC ACC AAC ACA GAC GGC TCC TTC ATA TGT GGC TGT GTT GAA GGA TAC	1003					
Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val Glu Gly Tyr						
165 170 175						
CTC CTG CAG CCG GAT AAC CGC TCC TGC AAG GCC AAG AAC GAG CCA GTA	1051					
Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn Glu Pro Val						
180 185 190 195						

FIG. 14A

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GAC Asp	CGG Arg	CCC Pro	CCT Pro	GTG Val 200	CTG Leu	TTG Leu	ATA Ile	GCC Ala	AAC Asn 205	TCC Ser	CAG Gln	AAC Asn	ATC Ile	TTG Leu 210	GCC Ala	1099
ACG Thr	TAC Tyr	CTG Leu	AGT Ser 215	GGG Gly	GCC Ala	CAG Gln	GTG Val 220	TCT Ser	ACC Thr	ATC Ile	ACA Thr	CCT Pro	ACG Thr 225	AGC Ser	ACG Thr	1147
CGG Arg	CAG Gln	ACC Thr 230	ACA Thr	GCC Ala	ATG Met	GAC Asp	TTC Phe 235	AGC Ser	TAT Tyr	GCC Ala	AAC Asn	GAG Glu 240	ACC Thr	GTA Val	TGC Cys	1195
TGG Trp 245	GTG Val	CAT His	GTT Val	GGG Gly	GAC Asp	AGT Ser 250	GCT Ala	GCT Ala	CAG Gln	ACG Thr	CAG Gln 255	CTC Leu	AAG Lys	TGT Cys	GCC Ala	1243
CGC Arg 260	ATG Met	CCT Pro	GGC Gly	CTA Leu	AAG Lys 265	GGC Gly	TTC Phe	GTG Val	GAT Asp	GAG Glu 270	CAC His	ACC Thr	ATC Ile	AAC Asn	ATC Ile 275	1291
TCC Ser	CTC Leu	AGT Ser	CTG Leu	CAC His 280	CAC His	GTG Val	GAA Glu	CAG Gln	ATG Met 285	GCC Ala	ATC Ile	GAC Asp	TGG Trp	CTG Leu 290	ACA Thr	1339
GGC Gly	AAC Asn	TTC Phe	TAC Tyr 295	TTT Phe	GTG Val	GAT Asp	GAC Asp	ATC Ile 300	GAT Asp	GAT Asp	AGG Arg	ATC Ile	TTT Phe 305	GTC Val	TGC Cys	1387
AAC Asn	AGA Arg	AAT Asn 310	GGG Gly	GAC Asp	ACA Thr	TGT Cys	GTC Val 315	ACA Thr	TTG Leu	CTA Leu	GAC Asp	CTG Leu 320	GAA Glu	CTC Leu	TAC Tyr	1435
AAC Asn 325	CCC Pro	AAG Lys	GGC Gly	ATT Ile	GCC Ala	CTG Leu 330	GAC Asp	CCT Pro	GCC Ala	ATG Met	GGG Gly 335	AAG Lys	GTG Val	TTT Phe	TTC Phe	1483
ACT Thr 340	GAC Asp	TAT Tyr	GGG Gly	CAG Gln	ATC Ile 345	CCA Pro	AAG Lys	GTG Val	GAA Glu	CGC Arg 350	TGT Cys	GAC Asp	ATG Met	GAT Asp	GGG Gly 355	1531
CAG Gln	AAC Asn	CGC Arg	ACC Thr 360	AAG Lys	CTC Leu	GTC Val	GAC Asp	AGC Ser	AAG Lys 365	ATT Ile	GTG Val	TTT Phe	CCT Pro	CAT His 370	GGC Gly	1579
ATC Ile	ACG Thr	CTG Leu	GAC Asp 375	CTG Leu	GTC Val	AGC Ser	CGC Arg	CTT Leu 380	GTC Val	TAC Tyr	TGG Trp	GCA Ala	GAT Asp 385	GCC Ala	TAT Tyr	1627
CTG Leu	GAC Asp	TAT Tyr 390	ATT Ile	GAA Glu	GTG Val	GTG Val	GAC Asp 395	TAT Tyr	GAG Glu	GGC Gly	AAG Lys	GGC Gly 400	CGC Arg	CAG Gln	ACC Thr	1675
ATC Ile 405	ATC Ile	CAG Gln	GGC Gly	ATC Ile	CTG Leu	ATT Ile 410	GAG Glu	CAC His	CTG Leu	TAC Tyr	GGC Gly 415	CTG Leu	ACT Thr	GTG Val	TTT Phe	1723
GAG Glu 420	AAT Asn	TAT Tyr	CTC Leu	TAT Tyr	GCC Ala 425	ACC Thr	AAC Asn	TCG Ser	GAC Asp	AAT Asn 430	GCC Ala	AAT Asn	GCC Ala	CAG Gln	CAG Gln 435	1771

FIG. 14A

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AAG	ACG	AGT	GTG	ATC	CGT	GTG	AAC	CGC	TTT	AAC	AGC	ACC	GAG	TAC	CAG	1819
Lys	Thr	Ser	Val	Ile	Arg	Val	Asn	Arg	Phe	Asn	Ser	Thr	Glu	Tyr	Gln	
				440					445						450	
GTT	GTC	ACC	CGG	GTG	GAC	AAG	GGT	GGT	GCC	CTC	CAC	ATC	TAC	CAC	CAG	1867
Val	Val	Thr	Arg	Val	Asp	Lys	Gly	Gly	Ala	Leu	His	Ile	Tyr	His	Gln	
			455					460					465			
AGG	CGT	CAG	CCC	CGA	GTG	AGG	AGC	CAT	GCC	TGT	GAA	AAC	GAC	CAG	TAT	1915
Arg	Arg	Gln	Pro	Arg	Val	Arg	Ser	His	Ala	Cys	Glu	Asn	Asp	Gln	Tyr	
		470					475					480				
GGG	AAG	CCG	GGT	GGC	TGC	TCT	GAC	ATC	TGC	CTG	CTG	GCC	AAC	AGC	CAC	1963
Gly	Lys	Pro	Gly	Gly	Cys	Ser	Asp	Ile	Cys	Leu	Leu	Ala	Asn	Ser	His	
	485					490					495					
AAG	GCG	CGG	ACC	TGC	CGC	TGC	CGT	TCC	GGC	TTC	AGC	CTG	GGC	AGT	GAC	2011
Lys	Ala	Arg	Thr	Cys	Arg	Cys	Arg	Ser	Gly	Phe	Ser	Leu	Gly	Ser	Asp	
500					505					510					515	
GGG	AAG	TCA	TGC	AAG	AAG	CCG	GAG	CAT	GAG	CTG	TTC	CTC	GTG	TAT	GGC	2059
Gly	Lys	Ser	Cys	Lys	Lys	Pro	Glu	His	Glu	Leu	Phe	Leu	Val	Tyr	Gly	
			520						525					530		
AAG	GCG	CGG	CCA	GGC	ATC	ATC	CGG	GGC	ATG	GAT	ATG	GGG	GCC	AAG	GTC	2107
Lys	Gly	Arg	Pro	Gly	Ile	Ile	Arg	Gly	Met	Asp	Met	Gly	Ala	Lys	Val	
			535					540					545			
CCG	GAT	GAG	CAC	ATG	ATC	CCC	ATT	GAA	AAC	CTC	ATG	AAC	CCC	CGA	GCC	2155
Pro	Asp	Glu	His	Met	Ile	Pro	Ile	Glu	Asn	Leu	Met	Asn	Pro	Arg	Ala	
		550					555					560				
CTG	GAC	TTC	CAC	GCT	GAG	ACC	GGC	TTC	ATC	TAC	TTT	GCC	GAC	ACC	ACC	2203
Leu	Asp	Phe	His	Ala	Glu	Thr	Gly	Phe	Ile	Tyr	Phe	Ala	Asp	Thr	Thr	
	565					570					575					
AGC	TAC	CTC	ATT	GGC	CGC	CAG	AAG	ATT	GAT	GGC	ACT	GAG	CGG	GAG	ACC	2251
Ser	Tyr	Leu	Ile	Gly	Arg	Gln	Lys	Ile	Asp	Gly	Thr	Glu	Arg	Glu	Thr	
580					585					590					595	
ATC	CTG	AAG	GAC	GGC	ATC	CAC	AAT	GTG	GAG	GGT	GTG	GCC	GTG	GAC	TGG	2299
Ile	Leu	Lys	Asp	Gly	Ile	His	Asn	Val	Glu	Gly	Val	Ala	Val	Asp	Trp	
			600						605					610		
ATG	GGA	GAC	AAT	CTG	TAC	TGG	ACG	GAC	GAT	GGG	CCC	AAA	AAG	ACA	ATC	2347
Met	Gly	Asp	Asn	Leu	Tyr	Trp	Thr	Asp	Asp	Gly	Pro	Lys	Lys	Thr	Ile	
			615					620					625			
AGC	GTG	GCC	AGG	CTG	GAG	AAA	GCT	GCT	CAG	ACC	CGC	AAG	ACT	TTA	ATC	2395
Ser	Val	Ala	Arg	Leu	Glu	Lys	Ala	Ala	Gln	Thr	Arg	Lys	Thr	Leu	Ile	
		630					635					640				
GAG	GGC	AAA	ATG	ACA	CAC	CCC	AGG	GCT	ATT	GTG	GTG	GAT	CCA	CTC	AAT	2443
Glu	Gly	Lys	Met	Thr	His	Pro	Arg	Ala	Ile	Val	Val	Asp	Pro	Leu	Asn	
	645					650					655					
GGG	TGG	ATG	TAC	TGG	ACA	GAC	TGG	GAG	GAG	GAC	CCC	AAG	GAC	AGT	CGG	2491
Gly	Trp	Met	Tyr	Trp	Thr	Asp	Trp	Glu	Glu	Asp	Pro	Lys	Asp	Ser	Arg	
660					665					670					675	

FIG. 14A

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CGT	GGG	CGG	CTG	GAG	AGG	GCG	TGG	ATG	GAT	GGC	TCA	CAC	CGA	GAC	ATC	2539
Arg	Gly	Arg	Leu	Glu	Arg	Ala	Trp	Met	Asp	Gly	Ser	His	Arg	Asp	Ile	
				680					685					690		
TTT	GTC	ACC	TCC	AAG	ACA	GTG	CTT	TGG	CCC	AAT	GGG	CTA	AGC	CTG	GAC	2587
Phe	Val	Thr	Ser	Lys	Thr	Val	Leu	Trp	Pro	Asn	Gly	Leu	Ser	Leu	Asp	
			695					700					705			
ATC	CCG	GCT	GGG	CGC	CTC	TAC	TGG	GTG	GAT	GCC	TTC	TAC	GAC	CGC	ATC	2635
Ile	Pro	Ala	Gly	Arg	Leu	Tyr	Trp	Val	Asp	Ala	Phe	Tyr	Asp	Arg	Ile	
		710					715					720				
GAG	ACG	ATA	CTG	CTC	AAT	GGC	ACA	GAC	CGG	AAG	ATT	GTG	TAT	GAA	GGT	2683
Glu	Thr	Ile	Leu	Leu	Asn	Gly	Thr	Asp	Arg	Lys	Ile	Val	Tyr	Glu	Gly	
	725					730					735					
CCT	GAG	CTG	AAC	CAC	GCC	TTT	GGC	CTG	TGT	CAC	CAT	GGC	AAC	TAC	CTC	2731
Pro	Glu	Leu	Asn	His	Ala	Phe	Gly	Leu	Cys	His	His	Gly	Asn	Tyr	Leu	
	740				745					750					755	
TTC	TGG	ACT	GAG	TAT	CGG	AGT	GGC	AGT	GTC	TAC	CGC	TTG	GAA	CGG	GGT	2779
Phe	Trp	Thr	Glu	Tyr	Arg	Ser	Gly	Ser	Val	Tyr	Arg	Leu	Glu	Arg	Gly	
				760					765					770		
GTA	GGA	GGC	GCA	CCC	CCC	ACT	GTG	ACC	CTT	CTG	CGC	AGT	GAG	CGG	CCC	2827
Val	Gly	Gly	Ala	Pro	Pro	Thr	Val	Thr	Leu	Leu	Arg	Ser	Glu	Arg	Pro	
			775					780						785		
CCC	ATC	TTT	GAG	ATC	CGA	ATG	TAT	GAT	GCC	CAG	CAG	CAG	CAA	GTT	GGC	2875
Pro	Ile	Phe	Glu	Ile	Arg	Met	Tyr	Asp	Ala	Gln	Gln	Gln	Gln	Val	Gly	
		790					795					800				
ACC	AAC	AAA	TGC	CGG	GTG	AAC	AAT	GGC	GGC	TGC	AGC	AGC	CTG	TGC	TTG	2923
Thr	Asn	Lys	Cys	Arg	Val	Asn	Asn	Gly	Gly	Cys	Ser	Ser	Leu	Cys	Leu	
	805					810					815					
GCC	ACC	CCT	GGG	AGC	CGC	CAG	TGC	GCC	TGT	GCT	GAG	GAC	CAG	GTG	TTG	2971
Ala	Thr	Pro	Gly	Ser	Arg	Gln	Cys	Ala	Cys	Ala	Glu	Asp	Gln	Val	Leu	
	820				825				830						835	
GAC	GCA	GAC	GGC	GTC	ACT	TGC	TTG	GCG	AAC	CCA	TCC	TAC	GTG	CCT	CCA	3019
Asp	Ala	Asp	Gly	Val	Thr	Cys	Leu	Ala	Asn	Pro	Ser	Tyr	Val	Pro	Pro	
				840					845					850		
CCC	CAG	TGC	CAG	CCA	GGC	GAG	TTT	GCC	TGT	GCC	AAC	AGC	CGC	TGC	ATC	3067
Pro	Gln	Cys	Gln	Pro	Gly	Glu	Phe	Ala	Cys	Ala	Asn	Ser	Arg	Cys	Ile	
			855					860					865			
CAG	GAG	CGC	TGG	AAG	TGT	GAC	GGA	GAC	AAC	GAT	TGC	CTG	GAC	AAC	AGT	3115
Gln	Glu	Arg	Trp	Lys	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Leu	Asp	Asn	Ser	
		870					875					880				
GAT	GAG	GCC	CCA	GCC	CTC	TGC	CAT	CAG	CAC	ACC	TGC	CCC	TCG	GAC	CGA	3163
Asp	Glu	Ala	Pro	Ala	Leu	Cys	His	Gln	His	Thr	Cys	Pro	Ser	Asp	Arg	
	885					890					895					
TTC	AAG	TGC	GAG	AAC	AAC	CGG	TGC	ATC	CCC	AAC	CGC	TGG	CTC	TGC	GAC	3211
Phe	Lys	Cys	Glu	Asn	Asn	Arg	Cys	Ile	Pro	Asn	Arg	Trp	Leu	Cys	Asp	
	900				905					910					915	

FIG. 14A

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GGG Gly	GAC Asp	AAT Asn	GAC Asp	TGT Cys 920	GGG Gly	AAC Asn	AGT Ser	GAA Glu	GAT Asp 925	GAG Glu	TCC Ser	AAT Asn	GCC Ala	ACT Thr 930	TGT Cys	3259
TCA Ser	GCC Ala	CGC Arg	ACC Thr 935	TGC Cys	CCC Pro	CCC Pro	AAC Asn	CAG Gln 940	TTC Phe	TCC Ser	TGT Cys	GCC Ala	AGT Ser 945	GGC Gly	CGC Arg	3307
TGC Cys	ATC Ile	CCC Pro 950	ATC Ile	TCC Ser	TGG Trp	ACG Thr	TGT Cys 955	GAT Asp	CTG Leu	GAT Asp	GAC Asp 960	GAC Asp	TGT Cys	GGG Gly	GAC Asp	3355
CGC Arg	TCT Ser 965	GAT Asp	GAG Glu	TCT Ser	GCT Ala	TCG Ser 970	TGT Cys	GCC Ala	TAT Tyr	CCC Pro	ACC Thr 975	TGC Cys	TTC Phe	CCC Pro	CTG Leu	3403
ACT Thr 980	CAG Gln	TTT Phe	ACC Thr	TGC Cys	AAC Asn 985	AAT Asn	GGC Gly	AGA Arg	TGT Cys 990	ATC Ile	AAC Asn	ATC Ile	AAC Asn	TGG Trp	AGA Arg 995	3451
TGC Cys	GAC Asp	AAT Asn	GAC Asp	AAT Asn 1000	GAC Asp	TGT Cys	GGG Gly	GAC Asp 1005	AAC Asn	AGT Ser	GAC Asp	GAA Glu	GCC Ala 1010	GGC Gly	TGC Cys	3499
AGC Ser	CAC His	TCC Ser 1015	TGT Cys	TCT Ser	AGC Ser	ACC Thr	CAG Gln 1020	TTC Phe	AAG Lys	TGC Cys	AAC Asn	AGC Ser 1025	GGG Gly	CGT Arg	TGC Cys	3547
ATC Ile	CCC Pro 1030	GAG Glu	CAC His	TGG Trp	ACC Thr	TGC Cys	GAT Asp 1035	GGG Gly	GAC Asp	AAT Asn	GAC Asp 1040	TGC Cys	GGA Gly	GAC Asp	TAC Tyr	3595
AGT Ser 1045	GAT Asp	GAG Glu	ACA Thr	CAC His	GCC Ala	AAC Asn 1050	TGC Cys	ACC Thr	AAC Asn	CAG Gln 1055	GCC Ala	ACG Thr	AGG Arg	CCC Pro	CCT Pro	3643
GGT Gly 1060	GGC Gly	TGC Cys	CAC His	ACT Thr 1065	GAT Asp	GAG Glu	TTC Phe	CAG Gln	TGC Cys 1070	CGG Arg	CTG Leu	GAT Asp	GGA Gly	CTA Leu 1075	TGC Cys	3691
ATC Ile	CCC Pro	CTG Leu	CGG Arg 1080	TGG Trp	CGC Arg	TGC Cys	GAT Asp	GGG Gly	GAC Asp 1085	ACT Thr	GAC Asp	TGC Cys	ATG Met 1090	GAC Asp	TCC Ser	3739
AGC Ser	GAT Asp	GAG Glu	AAG Lys 1095	AGC Ser	TGT Cys	GAG Glu	GGA Gly 1100	GTG Val	ACC Thr	CAC His	GTC Val	TGC Cys 1105	GAT Asp	CCC Pro	AGT Ser	3787
GTC Val	AAG Lys 1110	TTT Phe	GGC Gly	TGC Cys	AAG Lys	GAC Asp 1115	TCA Ser	GCT Ala	CGG Arg	TGC Cys	ATC Ile 1120	AGC Ser	AAA Lys	GCG Ala	TGG Trp	3835
GTG Val 1125	TGT Cys	GAT Asp	GGC Gly	GAC Asp	AAT Asn 1130	GAC Asp	TGT Cys	GAG Glu	GAT Asp 1135	AAC Asn	TCG Ser	GAC Asp	GAG Glu	GAG Glu	AAC Asn	3883
TGC Cys 1140	GAG Glu	TCC Ser	CTG Leu	GCC Ala 1145	TGC Cys	AGG Arg	CCA Pro	CCC Pro	TCG Ser 1150	CAC His	CCT Pro	TGT Cys	GCC Ala	AAC Asn 1155	AAC Asn	3931

FIG. 14A

ACC TCA GTC TGC CTG CCC CCT GAC AAG CTG TGT GAT GGC AAC GAC GAC Thr Ser Val Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp 1160 1165 1170	3979
TGT GGC GAC GGC TCA GAT GAG GGC GAG CTC TGC GAC CAG TGC TCT CTG Cys Gly Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu 1175 1180 1185	4027
AAT AAC GGT GGC TGC AGC CAC AAC TGC TCA GTG GCA CCT GGC GAA GGC Asn Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala Pro Gly Glu Gly 1190 1195 1200	4075
ATT GTG TGT TCC TGC CCT CTG GGC ATG GAG CTG GGG CCC GAC AAC CAC Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly Pro Asp Asn His 1205 1210 1215	4123
ACC TGC CAG ATC CAG AGC TAC TGT GCC AAG CAT CTC AAA TGC AGC CAA Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu Lys Cys Ser Gln 1220 1225 1230 1235	4171
AAG TGC GAC CAG AAC AAG TTC AGC GTG AAG TGC TCC TGC TAC GAG GGC Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser Cys Tyr Glu Gly 1240 1245 1250	4219
TGG GTC CTG GAA CCT GAC GGC GAG AGC TGC CGC AGC CTG GAC CCC TTC Trp Val Leu Glu Pro Asp Gly Glu Ser Cys Arg Ser Leu Asp Pro Phe 1255 1260 1265	4267
AAG CCG TTC ATC ATT TTC TCC AAC CGC CAT GAA ATC CGG CGC ATC GAT Lys Pro Phe Ile Ile Phe Ser Asn Arg His Glu Ile Arg Arg Ile Asp 1270 1275 1280	4315
CTT CAC AAA GGA GAC TAC AGC GTC CTG GTG CCC GGC CTG CGC AAC ACC Leu His Lys Gly Asp Tyr Ser Val Leu Val Pro Gly Leu Arg Asn Thr 1285 1290 1295	4363
ATC GCC CTG GAC TTC CAC CTC AGC CAG AGC GCC CTC TAC TGG ACC GAC Ile Ala Leu Asp Phe His Leu Ser Gln Ser Ala Leu Tyr Trp Thr Asp 1300 1305 1310 1315	4411
GTG GTG GAG GAC AAG ATC TAC CGC GGG AAG CTG CTG GAC AAC GGA GCC Val Val Glu Asp Lys Ile Tyr Arg Gly Lys Leu Leu Asp Asn Gly Ala 1320 1325 1330	4459
CTG ACT AGT TTC GAG GTG GTG ATT CAG TAT GGC CTG GCC ACA CCC GAG Leu Thr Ser Phe Glu Val Val Ile Gln Tyr Gly Leu Ala Thr Pro Glu 1335 1340 1345	4507
GGC CTG GCT GTA GAC TGG ATT GCA GGC AAC ATC TAC TGG GTG GAG AGT Gly Leu Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser 1350 1355 1360	4555
AAC CTG GAT CAG ATC GAG GTG GCC AAG CTG GAT GGG ACC CTC CGG ACC Asn Leu Asp Gln Ile Glu Val Ala Lys Leu Asp Gly Thr Leu Arg Thr 1365 1370 1375	4603
ACC CTG CTG GCC GGT GAC ATT GAG CAC CCA AGG GCA ATC GCA CTG GAT Thr Leu Leu Ala Gly Asp Ile Glu His Pro Arg Ala Ile Ala Leu Asp 1380 1385 1390 1395	4651

FIG. 14A

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CCC	CGG	GAT	GGG	ATC	CTG	TTT	TGG	ACA	GAC	TGG	GAT	GCC	AGC	CTG	CCC	4699
Pro	Arg	Asp	Gly	Ile	Leu	Phe	Trp	Thr	Asp	Trp	Asp	Ala	Ser	Leu	Pro	
			1400						1405					1410		
CGC	ATT	GAG	GCA	GCC	TCC	ATG	AGT	GGG	GCT	GGG	CGC	CGC	ACC	GTG	CAC	4747
Arg	Ile	Glu	Ala	Ala	Ser	Met	Ser	Gly	Ala	Gly	Arg	Arg	Thr	Val	His	
			1415					1420					1425			
CGG	GAG	ACC	GGC	TCT	GGG	GGC	TGG	CCC	AAC	GGG	CTC	ACC	GTG	GAC	TAC	4795
Arg	Glu	Thr	Gly	Ser	Gly	Gly	Trp	Pro	Asn	Gly	Leu	Thr	Val	Asp	Tyr	
		1430					1435					1440				
CTG	GAG	AAG	CGC	ATC	CTT	TGG	ATT	GAC	GCC	AGG	TCA	GAT	GCC	ATT	TAC	4843
Leu	Glu	Lys	Arg	Ile	Leu	Trp	Ile	Asp	Ala	Arg	Ser	Asp	Ala	Ile	Tyr	
		1445				1450					1455					
TCA	GCC	CGT	TAC	GAC	GGC	TCT	GGC	CAC	ATG	GAG	GTG	CTT	CGG	GGA	CAC	4891
Ser	Ala	Arg	Tyr	Asp	Gly	Ser	Gly	His	Met	Glu	Val	Leu	Arg	Gly	His	
1460					1465				1470					1475		
GAG	TTC	CTG	TCG	CAC	CCG	TTT	GCA	GTG	ACG	CTG	TAC	GGG	GGG	GAG	GTC	4939
Glu	Phe	Leu	Ser	His	Pro	Phe	Ala	Val	Thr	Leu	Tyr	Gly	Gly	Glu	Val	
				1480					1485					1490		
TAC	TGG	ACT	GAC	TGG	CGA	ACA	AAC	ACA	CTG	GCT	AAG	GCC	AAC	AAG	TGG	4987
Tyr	Trp	Thr	Asp	Trp	Arg	Thr	Asn	Thr	Leu	Ala	Lys	Ala	Asn	Lys	Trp	
			1495					1500					1505			
ACC	GGC	CAC	AAT	GTC	ACC	GTG	GTA	CAG	AGG	ACC	AAC	ACC	CAG	CCC	TTT	5035
Thr	Gly	His	Asn	Val	Thr	Val	Val	Gln	Arg	Thr	Asn	Thr	Gln	Pro	Phe	
		1510					1515					1520				
GAC	CTG	CAG	GTG	TAC	CAC	CCC	TCC	CGC	CAG	CCC	ATG	GCT	CCC	AAT	CCC	5083
Asp	Leu	Gln	Val	Tyr	His	Pro	Ser	Arg	Gln	Pro	Met	Ala	Pro	Asn	Pro	
		1525				1530					1535					
TGT	GAG	GCC	AAT	GGG	GGC	CAG	GGC	CCC	TGC	TCC	CAC	CTG	TGT	CTC	ATC	5131
Cys	Glu	Ala	Asn	Gly	Gly	Gln	Gly	Pro	Cys	Ser	His	Leu	Cys	Leu	Ile	
1540				1545				1550						1555		
AAC	TAC	AAC	CGG	ACC	GTG	TCC	TGC	GCC	TGC	CCC	CAC	CTC	ATG	AAG	CTC	5179
Asn	Tyr	Asn	Arg	Thr	Val	Ser	Cys	Ala	Cys	Pro	His	Leu	Met	Lys	Leu	
			1560					1565					1570			
CAC	AAG	GAC	AAC	ACC	ACC	TGC	TAT	GAG	TTT	AAG	AAG	TTC	CTG	CTG	TAC	5227
His	Lys	Asp	Asn	Thr	Thr	Cys	Tyr	Glu	Phe	Lys	Lys	Phe	Leu	Leu	Tyr	
			1575				1580						1585			
GCA	CGT	CAG	ATG	GAG	ATC	CGA	GGT	GTG	GAC	CTG	GAT	GCT	CCC	TAC	TAC	5275
Ala	Arg	Gln	Met	Glu	Ile	Arg	Gly	Val	Asp	Leu	Asp	Ala	Pro	Tyr	Tyr	
		1590				1595						1600				
AAC	TAC	ATC	ATC	TCC	TTC	ACG	GTG	CCC	GAC	ATC	GAC	AAC	GTC	ACA	GTG	5323
Asn	Tyr	Ile	Ile	Ser	Phe	Thr	Val	Pro	Asp	Ile	Asp	Asn	Val	Thr	Val	
		1605				1610					1615					
CTA	GAC	TAC	GAT	GCC	CGC	GAG	CAG	CGT	GTG	TAC	TGG	TCT	GAC	GTG	CGG	5371
Leu	Asp	Tyr	Asp	Ala	Arg	Glu	Gln	Arg	Val	Tyr	Trp	Ser	Asp	Val	Arg	
1620				1625				1630						1635		

FIG. 14A

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ACA CAG GCC ATC AAG CGG GCC TTC ATC AAC GGC ACA GGC GTG GAG ACA	5419
Thr Gln Ala Ile Lys Arg Ala Phe Ile Asn Gly Thr Gly Val Glu Thr	
1640 1645 1650	
GTC GTC TCT GCA GAC TTG CCA AAT GCC CAC GGG CTG GCT GTG GAC TGG	5467
Val Val Ser Ala Asp Leu Pro Asn Ala His Gly Leu Ala Val Asp Trp	
1655 1660 1665	
GTC TCC CGA AAC CTG TTC TGG ACA AGC TAT GAC ACC AAT AAG AAG CAG	5515
Val Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr Asn Lys Lys Gln	
1670 1675 1680	
ATC AAT GTG GCC CGG CTG GAT GGC TCC TTC AAG AAC GCA GTG GTG CAG	5563
Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn Ala Val Val Gln	
1685 1690 1695	
GGC CTG GAG CAG CCC CAT GGC CTT GTC GTC CAC CCT CTG CGT GGG AAG	5611
Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro Leu Arg Gly Lys	
1700 1705 1710 1715	
CTC TAC TGG ACC GAT GGT GAC AAC ATC AGC ATG GCC AAC ATG GAT GGC	5659
Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala Asn Met Asp Gly	
1720 1725 1730	
AGC AAT CGC ACC CTG CTC TTC AGT GGC CAG AAG GGC CCC GTG GGC CTG	5707
Ser Asn Arg Thr Leu Leu Phe Ser Gly Gln Lys Gly Pro Val Gly Leu	
1735 1740 1745	
GCT ATT GAC TTC CCT GAA AGC AAA CTC TAC TGG ATC AGC TCC GGG AAC	5755
Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp Ile Ser Ser Gly Asn	
1750 1755 1760	
CAT ACC ATC AAC CGC TGC AAC CTG GAT GGG AGT GGG CTG GAG GTC ATC	5803
His Thr Ile Asn Arg Cys Asn Leu Asp Gly Ser Gly Leu Glu Val Ile	
1765 1770 1775	
GAT GCC ATG CGG AGC CAG CTG GGC AAG GCC ACC GCC CTG GCC ATC ATG	5851
Asp Ala Met Arg Ser Gln Leu Gly Lys Ala Thr Ala Leu Ala Ile Met	
1780 1785 1790 1795	
GGG GAC AAG CTG TGG TGG GCT GAT CAG GTG TCG GAA AAG ATG GGC ACA	5899
Gly Asp Lys Leu Trp Trp Ala Asp Gln Val Ser Glu Lys Met Gly Thr	
1800 1805 1810	
TGC AGC AAG GCT GAC GGC TCG GGC TCC GTG GTC CTT CGG AAC AGC ACC	5947
Cys Ser Lys Ala Asp Gly Ser Gly Ser Val Val Leu Arg Asn Ser Thr	
1815 1820 1825	
ACC CTG GTG ATG CAC ATG AAG GTC TAT GAC GAG AGC ATC CAG CTG GAC	5995
Thr Leu Val Met His Met Lys Val Tyr Asp Glu Ser Ile Gln Leu Asp	
1830 1835 1840	
CAT AAG GGC ACC AAC CCC TGC AGT GTC AAC AAC GGT GAC TGC TCC CAG	6043
His Lys Gly Thr Asn Pro Cys Ser Val Asn Asn Gly Asp Cys Ser Gln	
1845 1850 1855	
CTC TGC CTG CCC ACG TCA GAG ACG ACC CGC TCC TGC ATG TGC ACA GCC	6091
Leu Cys Leu Pro Thr Ser Glu Thr Thr Arg Ser Cys Met Cys Thr Ala	
1860 1865 1870 1875	

FIG. 14A

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GGC	TAT	AGC	CTC	CGG	AGT	GGC	CAG	CAG	GCC	TGC	GAG	GGC	GTA	GGT	TCC	6139
Gly	Tyr	Ser	Leu	Arg	Ser	Gly	Gln	Gln	Ala	Cys	Glu	Gly	Val	Gly	Ser	
				1880					1885						1890	
TTT	CTC	CTG	TAC	TCT	GTG	CAT	GAG	GGA	ATC	AGG	GGA	ATT	CCC	CTG	GAT	6187
Phe	Leu	Leu	Tyr	Ser	Val	His	Glu	Gly	Ile	Arg	Gly	Ile	Pro	Leu	Asp	
			1895						1900						1905	
CCC	AAT	GAC	AAG	TCA	GAT	GCC	CTG	GTC	CCA	GTG	TCC	GGG	ACC	TCG	CTG	6235
Pro	Asn	Asp	Lys	Ser	Asp	Ala	Leu	Val	Pro	Val	Ser	Gly	Thr	Ser	Leu	
		1910						1915				1920				
GCT	GTC	GGC	ATC	GAC	TTC	CAC	GCT	GAA	AAT	GAC	ACC	ATC	TAC	TGG	GTG	6283
Ala	Val	Gly	Ile	Asp	Phe	His	Ala	Glu	Asn	Asp	Thr	Ile	Tyr	Trp	Val	
	1925						1930				1935					
GAC	ATG	GGC	CTG	AGC	ACG	ATC	AGC	CGG	GCC	AAG	CGG	GAC	CAG	ACG	TGG	6331
Asp	Met	Gly	Leu	Ser	Thr	Ile	Ser	Arg	Ala	Lys	Arg	Asp	Gln	Thr	Trp	
1940					1945					1950					1955	
CGT	GAA	GAC	GTG	GTG	ACC	AAT	GGC	ATT	GGC	CGT	GTG	GAG	GGC	ATT	GCA	6379
Arg	Glu	Asp	Val	Val	Thr	Asn	Gly	Ile	Gly	Arg	Val	Glu	Gly	Ile	Ala	
				1960					1965						1970	
GTG	GAC	TGG	ATC	GCA	GGC	AAC	ATC	TAC	TGG	ACA	GAC	CAG	GGC	TTT	GAT	6427
Val	Asp	Trp	Ile	Ala	Gly	Asn	Ile	Tyr	Trp	Thr	Asp	Gln	Gly	Phe	Asp	
			1975					1980						1985		
GTC	ATC	GAG	GTC	GCC	CGG	CTC	AAT	GGC	TCC	TTC	CGC	TAC	GTG	GTG	ATC	6475
Val	Ile	Glu	Val	Ala	Arg	Leu	Asn	Gly	Ser	Phe	Arg	Tyr	Val	Val	Ile	
		1990					1995					2000				
TCC	CAG	GGT	CTA	GAC	AAG	CCC	CGG	GCC	ATC	ACC	GTC	CAC	CCG	GAG	AAA	6523
Ser	Gln	Gly	Leu	Asp	Lys	Pro	Arg	Ala	Ile	Thr	Val	His	Pro	Glu	Lys	
		2005				2010					2015					
GGG	TAC	TTG	TTC	TGG	ACT	GAG	TGG	GGT	CAG	TAT	CCG	CGT	ATT	GAG	CGG	6571
Gly	Tyr	Leu	Phe	Trp	Thr	Glu	Trp	Gly	Gln	Tyr	Pro	Arg	Ile	Glu	Arg	
2020					2025					2030					2035	
TCT	CGG	CTA	GAT	GGC	ACG	GAG	CGT	GTG	GTG	CTG	GTC	AAC	GTC	AGC	ATC	6619
Ser	Arg	Leu	Asp	Gly	Thr	Glu	Arg	Val	Val	Leu	Val	Asn	Val	Ser	Ile	
				2040					2045						2050	
AGC	TGG	CCC	AAC	GGC	ATC	TCA	GTG	GAC	TAC	CAG	GAT	GGG	AAG	CTG	TAC	6667
Ser	Trp	Pro	Asn	Gly	Ile	Ser	Val	Asp	Tyr	Gln	Asp	Gly	Lys	Leu	Tyr	
			2055					2060					2065			
TGG	TGC	GAT	GCA	CGG	ACA	GAC	AAG	ATT	GAA	CGG	ATC	GAC	CTG	GAG	ACA	6715
Trp	Cys	Asp	Ala	Arg	Thr	Asp	Lys	Ile	Glu	Arg	Ile	Asp	Leu	Glu	Thr	
		2070					2075					2080				
GGT	GAG	AAC	CGC	GAG	GTG	GTT	CTG	TCC	AGC	AAC	AAC	ATG	GAC	ATG	TTT	6763
Gly	Glu	Asn	Arg	Glu	Val	Val	Leu	Ser	Ser	Asn	Asn	Met	Asp	Met	Phe	
	2085					2090					2095					
TCA	GTG	TCT	GTG	TTT	GAG	GAT	TTC	ATC	TAC	TGG	AGT	GAC	AGG	ACT	CAT	6811
Ser	Val	Ser	Val	Phe	Glu	Asp	Phe	Ile	Tyr	Trp	Ser	Asp	Arg	Thr	His	
2100					2105					2110					2115	

FIG. 14A

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GCC AAC GGC TCT ATC AAG CGC GGG AGC AAA GAC AAT GCC ACA GAC TCC Ala Asn Gly Ser Ile Lys Arg Gly Ser Lys Asp Asn Ala Thr Asp Ser 2120 2125 2130	6859
GTG CCC CTG CGA ACC GGC ATC GGC GTC CAG CTT AAA GAC ATC AAA GTC Val Pro Leu Arg Thr Gly Ile Gly Val Gln Leu Lys Asp Ile Lys Val 2135 2140 2145	6907
TTC AAC CGG GAC CGG CAG AAA GGC ACC AAC GTG TGC GCG GTG GCC AAT Phe Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys Ala Val Ala Asn 2150 2155 2160	6955
GGC GGG TGC CAG CAG CTG TGC CTG TAC CGG GGC CGT GGG CAG CGG GCC Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Arg Gly Gln Arg Ala 2165 2170 2175	7003
TGC GCC TGT GCC CAC GGG ATG CTG GCT GAA GAC GGA GCA TCG TGC CGC Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly Ala Ser Cys Arg 2180 2185 2190 2195	7051
GAG TAT GCC GGC TAC CTG CTC TAC TCA GAG CGC ACC ATT CTC AAG AGT Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr Ile Leu Lys Ser 2200 2205 2210	7099
ATC CAC CTG TCG GAT GAG CGC AAC CTC AAT GCG CCC GTG CAG CCC TTC Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro Val Gln Pro Phe 2215 2220 2225	7147
GAG GAC CCT GAG CAC ATG AAG AAC GTC ATC GCC CTG GCC TTT GAC TAC Glu Asp Pro Glu His Met Lys Asn Val Ile Ala Leu Ala Phe Asp Tyr 2230 2235 2240	7195
CGG GCA GGC ACC TCT CCG GGC ACC CCC AAT CGC ATC TTC TTC AGC GAC Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn Arg Ile Phe Phe Ser Asp 2245 2250 2255	7243
ATC CAC TTT GGG AAC ATC CAA CAG ATC AAC GAC GAT GGC TCC AGG AGG Ile His Phe Gly Asn Ile Gln Gln Ile Asn Asp Asp Gly Ser Arg Arg 2260 2265 2270 2275	7291
ATC ACC ATT GTG GAA AAC GTG GGC TCC GTG GAA GGC CTG GCC TAT CAC Ile Thr Ile Val Glu Asn Val Gly Ser Val Glu Gly Leu Ala Tyr His 2280 2285 2290	7339
CGT GGC TGG GAC ACT CTC TAT TGG ACA AGC TAC ACG ACA TCC ACC ATC Arg Gly Trp Asp Thr Leu Tyr Trp Thr Ser Tyr Thr Thr Ser Thr Ile 2295 2300 2305	7387
ACG CGC CAC ACA GTG GAC CAG ACC CGC CCA GGG GCC TTC GAG CGT GAG Thr Arg His Thr Val Asp Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu 2310 2315 2320	7435
ACC GTC ATC ACT ATG TCT GGA GAT GAC CAC CCA CGG GCC TTC GTT TTG Thr Val Ile Thr Met Ser Gly Asp Asp His Pro Arg Ala Phe Val Leu 2325 2330 2335	7483
GAC GAG TGC CAG AAC CTC ATG TTC TGG ACC AAC TGG AAT GAG CAG CAT Asp Glu Cys Gln Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His 2340 2345 2350 2355	7531

FIG. 14A

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CCC	AGC	ATC	ATG	CGG	GCG	GCG	CTC	TCG	GGA	GCC	AAT	GTC	CTG	ACC	CTT	7579
Pro	Ser	Ile	Met	Arg	Ala	Ala	Leu	Ser	Gly	Ala	Asn	Val	Leu	Thr	Leu	
			2360						2365					2370		
ATC	GAG	AAG	GAC	ATC	CGT	ACC	CCC	AAT	GGC	CTG	GCC	ATC	GAC	CAC	CGT	7627
Ile	Glu	Lys	Asp	Ile	Arg	Thr	Pro	Asn	Gly	Leu	Ala	Ile	Asp	His	Arg	
			2375					2380					2385			
GCC	GAG	AAG	CTC	TAC	TTC	TCT	GAC	GCC	ACC	CTG	GAC	AAG	ATC	GAG	CGG	7675
Ala	Glu	Lys	Leu	Tyr	Phe	Ser	Asp	Ala	Thr	Leu	Asp	Lys	Ile	Glu	Arg	
			2390				2395					2400				
TGC	GAG	TAT	GAC	GGC	TCC	CAC	CGC	TAT	GTG	ATC	CTA	AAG	TCA	GAG	CCT	7723
Cys	Glu	Tyr	Asp	Gly	Ser	His	Arg	Tyr	Val	Ile	Leu	Lys	Ser	Glu	Pro	
			2405				2410				2415					
GTC	CAC	CCC	TTC	GGG	CTG	GCC	GTG	TAT	GGG	GAG	CAC	ATT	TTC	TGG	ACT	7771
Val	His	Pro	Phe	Gly	Leu	Ala	Val	Tyr	Gly	Glu	His	Ile	Phe	Trp	Thr	
2420					2425					2430					2435	
GAC	TGG	GTG	CGG	CGG	GCA	GTG	CAG	CGG	GCC	AAC	AAG	CAC	GTG	GGC	AGC	7819
Asp	Trp	Val	Arg	Arg	Ala	Val	Gln	Arg	Ala	Asn	Lys	His	Val	Gly	Ser	
				2440					2445					2450		
AAC	ATG	AAG	CTG	CTG	CGC	GTG	GAC	ATC	CCC	CAG	CAG	CCC	ATG	GGC	ATC	7867
Asn	Met	Lys	Leu	Leu	Arg	Val	Asp	Ile	Pro	Gln	Gln	Pro	Met	Gly	Ile	
			2455					2460					2465			
ATC	GCC	GTG	GCC	AAC	GAC	ACC	AAC	AGC	TGT	GAA	CTC	TCT	CCA	TGC	CGA	7915
Ile	Ala	Val	Ala	Asn	Asp	Thr	Asn	Ser	Cys	Glu	Leu	Ser	Pro	Cys	Arg	
			2470				2475					2480				
ATC	AAC	AAC	GGT	GGC	TGC	CAG	GAC	CTG	TGT	CTG	CTC	ACT	CAC	CAG	GGC	7963
Ile	Asn	Asn	Gly	Gly	Cys	Gln	Asp	Leu	Cys	Leu	Leu	Thr	His	Gln	Gly	
			2485			2490					2495					
CAT	GTC	AAC	TGC	TCA	TGC	CGA	GGG	GGC	CGA	ATC	CTC	CAG	GAT	GAC	CTC	8011
His	Val	Asn	Cys	Ser	Cys	Arg	Gly	Gly	Arg	Ile	Leu	Gln	Asp	Asp	Leu	
2500					2505					2510					2515	
ACC	TGC	CGA	GCG	GTG	AAT	TCC	TCT	TGC	CGA	GCA	CAA	GAT	GAG	TTT	GAG	8059
Thr	Cys	Arg	Ala	Val	Asn	Ser	Ser	Cys	Arg	Ala	Gln	Asp	Glu	Phe	Glu	
				2520					2525					2530		
TGT	GCC	AAT	GGC	GAG	TGC	ATC	AAC	TTC	AGC	CTG	ACC	TGC	GAC	GGC	GTC	8107
Cys	Ala	Asn	Gly	Glu	Cys	Ile	Asn	Phe	Ser	Leu	Thr	Cys	Asp	Gly	Val	
			2535					2540					2545			
CCC	CAC	TGC	AAG	GAC	AAG	TCC	GAT	GAG	AAG	CCA	TCC	TAC	TGC	AAC	TCC	8155
Pro	His	Cys	Lys	Asp	Lys	Ser	Asp	Glu	Lys	Pro	Ser	Tyr	Cys	Asn	Ser	
			2550				2555					2560				
CGC	CGC	TGC	AAG	AAG	ACT	TTC	CGG	CAG	TGC	AGC	AAT	GGG	CGC	TGT	GTG	8203
Arg	Arg	Cys	Lys	Lys	Thr	Phe	Arg	Gln	Cys	Ser	Asn	Gly	Arg	Cys	Val	
			2565			2570					2575					
TCC	AAC	ATG	CTG	TGG	TGC	AAC	GGG	GCC	GAC	GAC	TGT	GGG	GAT	GGC	TCT	8251
Ser	Asn	Met	Leu	Trp	Cys	Asn	Gly	Ala	Asp	Asp	Cys	Gly	Asp	Gly	Ser	
2580					2585					2590					2595	

FIG. 14A

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(Sheet 73 of 91)

GAC GAG ATC CCT TGC AAC AAG ACA GCC TGT GGT GTG GGC GAG TTC CGC Asp Glu Ile Pro Cys Asn Lys Thr Ala Cys Gly Val Gly Glu Phe Arg 2600 2605 2610	8299
TGC CGG GAC GGG ACC TGC ATC GGG AAC TCC AGC CGC TGC AAC CAG TTT Cys Arg Asp Gly Thr Cys Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe 2615 2620 2625	8347
GTG GAT TGT GAG GAC GCC TCA GAT GAG ATG AAC TGC AGT GCC ACC GAC Val Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys Ser Ala Thr Asp 2630 2635 2640	8395
TGC AGC AGC TAC TTC CGC CTG GGC GTG AAG GGC GTG CTC TTC CAG CCC Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val Leu Phe Gln Pro 2645 2650 2655	8443
TGC GAG CGG ACC TCA CTC TGC TAC GCA CCC AGC TGG GTG TGT GAT GGC Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp Val Cys Asp Gly 2660 2665 2670 2675	8491
GCC AAT GAC TGT GGG GAC TAC AGT GAT GAG CGC GAC TGC CCA GGT GTG Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp Cys Pro Gly Val 2680 2685 2690	8539
AAA CGC CCC AGA TGC CCT CTG AAT TAC TTC GCC TGC CCT AGT GGG CGC Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys Pro Ser Gly Arg 2695 2700 2705	8587
TGC ATC CCC ATG AGC TGG ACG TGT GAC AAA GAG GAT GAC TGT GAA CAT Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu Asp Asp Cys Glu His 2710 2715 2720	8635
GGC GAG GAC GAG ACC CAC TGC AAC AAG TTC TGC TCA GAG GCC CAG TTT Gly Glu Asp Glu Thr His Cys Asn Lys Phe Cys Ser Glu Ala Gln Phe 2725 2730 2735	8683
GAG TGC CAG AAC CAT CGC TGC ATC TCC AAG CAG TGG CTG TGT GAC GGC Glu Cys Gln Asn His Arg Cys Ile Ser Lys Gln Trp Leu Cys Asp Gly 2740 2745 2750 2755	8731
AGC GAT GAC TGT GGG GAT GGC TCA GAC GAG GCT GCT CAC TGT GAA GGC Ser Asp Asp Cys Gly Asp Gly Ser Asp Glu Ala Ala His Cys Glu Gly 2760 2765 2770	8779
AAG ACG TGC GGC CCC TCC TCC TTC TCC TGC CCT GGC ACC CAC GTG TGC Lys Thr Cys Gly Pro Ser Ser Phe Ser Cys Pro Gly Thr His Val Cys 2775 2780 2785	8827
GTC CCC GAG CGC TGG CTC TGT GAC GGT GAC AAA GAC TGT GCT GAT GGT Val Pro Glu Arg Trp Leu Cys Asp Gly Asp Lys Asp Cys Ala Asp Gly 2790 2795 2800	8875
GCA GAC GAG AGC ATC GCA GCT GGT TGC TTG TAC AAC AGC ACT TGT GAC Ala Asp Glu Ser Ile Ala Ala Gly Cys Leu Tyr Asn Ser Thr Cys Asp 2805 2810 2815	8923
GAC CGT GAG TTC ATG TGC CAG AAC CGC CAG TGC ATC CCC AAG CAC TTC Asp Arg Glu Phe Met Cys Gln Asn Arg Gln Cys Ile Pro Lys His Phe 2820 2825 2830 2835	8971

FIG. 14A

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(Sheet 74 of 91)

GTG TGT GAC CAC GAC CGT GAC TGT GCA GAT GGC TCT GAT GAG TCC CCC	9019
Val Cys Asp His Asp Arg Asp Cys Ala Asp Gly Ser Asp Glu Ser Pro	
2840 2845 2850	
GAG TGT GAG TAC CCG ACC TGC GGC CCC AGT GAG TTC CGC TGT GCC AAT	9067
Glu Cys Glu Tyr Pro Thr Cys Gly Pro Ser Glu Phe Arg Cys Ala Asn	
2855 2860 2865	
GGG CGC TGT CTG AGC TCC CGC CAG TGG GAG TGT GAT GGC GAG AAT GAC	9115
Gly Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp Gly Glu Asn Asp	
2870 2875 2880	
TGC CAC GAC CAG AGT GAC GAG GCT CCC AAG AAC CCA CAC TGC ACC AGC	9163
Cys His Asp Gln Ser Asp Glu Ala Pro Lys Asn Pro His Cys Thr Ser	
2885 2890 2895	
CCA GAG CAC AAG TGC AAT GCC TCG TCA CAG TTC CTG TGC AGC AGT GGG	9211
Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu Cys Ser Ser Gly	
2900 2905 2910 2915	
CGC TGT GTG GCT GAG GCA CTG CTC TGC AAC GGC CAG GAT GAC TGT GGC	9259
Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln Asp Asp Cys Gly	
2920 2925 2930	
GAC AGC TCG GAC GAG CGT GGC TGC CAC ATC AAT GAG TGT CTC AGC CGC	9307
Asp Ser Ser Asp Glu Arg Gly Cys His Ile Asn Glu Cys Leu Ser Arg	
2935 2940 2945	
AAG CTC AGT GGC TGC AGC CAG GAC TGT GAG GAC CTC AAG ATC GGC TTC	9355
Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp Leu Lys Ile Gly Phe	
2950 2955 2960	
AAG TGC CGC TGT CGC CCT GGC TTC CGG CTG AAG GAT GAC GGC CGG ACG	9403
Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu Lys Asp Asp Gly Arg Thr	
2965 2970 2975	
TGT GCT GAT GTG GAC GAG TGC AGC ACC ACC TTC CCC TGC AGC CAG CGC	9451
Cys Ala Asp Val Asp Glu Cys Ser Thr Thr Phe Pro Cys Ser Gln Arg	
2980 2985 2990 2995	
TGC ATC AAC ACC CAT GGC AGC TAT AAG TGT CTG TGT GTG GAG GGC TAT	9499
Cys Ile Asn Thr His Gly Ser Tyr Lys Cys Leu Cys Val Glu Gly Tyr	
3000 3005 3010	
GCA CCC CGC GGC GGC GAC CCC CAC AGC TGC AAG GCT GTG ACT GAC GAG	9547
Ala Pro Arg Gly Gly Asp Pro His Ser Cys Lys Ala Val Thr Asp Glu	
3015 3020 3025	
GAA CCG TTT CTG ATC TTC GCC AAC CGG TAC TAC CTG CGC AAG CTC AAC	9595
Glu Pro Phe Leu Ile Phe Ala Asn Arg Tyr Tyr Leu Arg Lys Leu Asn	
3030 3035 3040	
CTG GAC GGG TCC AAC TAC ACG TTA CTT AAG CAG GGC CTG AAC AAC GCC	9643
Leu Asp Gly Ser Asn Tyr Thr Leu Leu Lys Gln Gly Leu Asn Asn Ala	
3045 3050 3055	
GTT GCC TTG GAT TTT GAC TAC CGA GAG CAG ATG ATC TAC TGG ACA GAT	9691
Val Ala Leu Asp Phe Asp Tyr Arg Glu Gln Met Ile Tyr Trp Thr Asp	
3060 3065 3070 3075	

FIG. 14A

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(Sheet 75 of 91)

GTG ACC ACC CAG GGC AGC ATG ATC CGA AGG ATG CAC CTT AAC GGG AGC Val Thr Thr Gln Gly Ser Met Ile Arg Arg Met His Leu Asn Gly Ser 3080 3085 3090	9739
AAT GTG CAG GTC CTA CAC CGT ACA GGC CTC AGC AAC CCC GAT GGG CTG Asn Val Gln Val Leu His Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu 3095 3100 3105	9787
GCT GTG GAC TGG GTG GGT GGC AAC CTG TAC TGG TGC GAC AAA GGC CGG Ala Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys Asp Lys Gly Arg 3110 3115 3120	9835
GAC ACC ATC GAG GTG TCC AAG CTC AAT GGG GCC TAT CGG ACG GTG CTG Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr Arg Thr Val Leu 3125 3130 3135	9883
GTC AGC TCT GGC CTC CGT GAG CCC AGG GCT CTG GTG GTG GAT GTG CAG Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val Val Asp Val Gln 3140 3145 3150 3155	9931
AAT GGG TAC CTG TAC TGG ACA GAC TGG GGT GAC CAT TCA CTG ATC GGC Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His Ser Leu Ile Gly 3160 3165 3170	9979
CGC ATC GGC ATG GAT GGG TCC AGC CGC AGC GTC ATC GTG GAC ACC AAG Arg Ile Gly Met Asp Gly Ser Ser Arg Ser Val Ile Val Asp Thr Lys 3175 3180 3185	10027
ATC ACA TGG CCC AAT GGC CTG ACG CTG GAC TAT GTC ACT GAG CGC ATC Ile Thr Trp Pro Asn Gly Leu Thr Leu Asp Tyr Val Thr Glu Arg Ile 3190 3195 3200	10075
TAC TGG GCC GAC GCC CGC GAG GAC TAC ATT GAA TTT GCC AGC CTG GAT Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile Glu Phe Ala Ser Leu Asp 3205 3210 3215	10123
GGC TCC AAT CGC CAC GTT GTG CTG AGC CAG GAC ATC CCG CAC ATC TTT Gly Ser Asn Arg His Val Val Leu Ser Gln Asp Ile Pro His Ile Phe 3220 3225 3230 3235	10171
GCA CTG ACC CTG TTT GAG GAC TAC GTC TAC TGG ACC GAC TGG GAA ACA Ala Leu Thr Leu Phe Glu Asp Tyr Val Tyr Trp Thr Asp Trp Glu Thr 3240 3245 3250	10219
AAG TCC ATT AAC CGA GCC CAC AAG ACC ACG GGC ACC AAC AAA ACG CTC Lys Ser Ile Asn Arg Ala His Lys Thr Thr Gly Thr Asn Lys Thr Leu 3255 3260 3265	10267
CTC ATC AGC ACG CTG CAC CGG CCC ATG GAC CTG CAT GTC TTC CAT GCC Leu Ile Ser Thr Leu His Arg Pro Met Asp Leu His Val Phe His Ala 3270 3275 3280	10315
CTG CGC CAG CCA GAC GTG CCC AAT CAC CCC TGC AAG GTC AAC AAT GGT Leu Arg Gln Pro Asp Val Pro Asn His Pro Cys Lys Val Asn Asn Gly 3285 3290 3295	10363
GGC TGC AGC AAC CTG TGC CTG CTG TCC CCC GGG GGA GGG CAC AAA TGT Gly Cys Ser Asn Leu Cys Leu Leu Ser Pro Gly Gly Gly His Lys Cys 3300 3305 3310 3315	10411

FIG. 14A

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(Sheet 76 of 91)

GCC TGC CCC ACC AAC TTC TAC CTG GGC AGC GAT GGG CGC ACC TGT GTG	10459
Ala Cys Pro Thr Asn Phe Tyr Leu Gly Ser Asp Gly Arg Thr Cys Val	
3320 3325 3330	
TCC AAC TGC ACG GCT AGC CAG TTT GTA TGC AAG AAC GAC AAG TGC ATC	10507
Ser Asn Cys Thr Ala Ser Gln Phe Val Cys Lys Asn Asp Lys Cys Ile	
3335 3340 3345	
CCC TTC TGG TGG AAG TGT GAC ACC GAG GAC GAC TGC GGG GAC CAC TCA	10555
Pro Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys Gly Asp His Ser	
3350 3355 3360	
GAC GAG CCC CCG GAC TGC CCT GAG TTC AAG TGC CGG CCC GGA CAG TTC	10603
Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg Pro Gly Gln Phe	
3365 3370 3375	
CAG TGC TCC ACA GGT ATC TGC ACA AAC CCT GCC TTC ATC TGC GAT GGC	10651
Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe Ile Cys Asp Gly	
3380 3385 3390 3395	
GAC AAT GAC TGC CAG GAC AAC AGT GAC GAG GCC AAC TGT GAC ATC CAC	10699
Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn Cys Asp Ile His	
3400 3405 3410	
GTC TGC TTG CCC AGT CAG TTC AAA TGC ACC AAC ACC AAC CGC TGT ATT	10747
Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr Asn Arg Cys Ile	
3415 3420 3425	
CCC GGC ATC TTC CGC TGC AAT GGG CAG GAC AAC TGC GGA GAT GGG GAG	10795
Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn Cys Gly Asp Gly Glu	
3430 3435 3440	
GAT GAG AGG GAC TGC CCC GAG GTG ACC TGC GCC CCC AAC CAG TTC CAG	10843
Asp Glu Arg Asp Cys Pro Glu Val Thr Cys Ala Pro Asn Gln Phe Gln	
3445 3450 3455	
TGC TCC ATT ACC AAA CGG TGC ATC CCC CGG GTC TGG GTC TGC GAC CGG	10891
Cys Ser Ile Thr Lys Arg Cys Ile Pro Arg Val Trp Val Cys Asp Arg	
3460 3465 3470 3475	
GAC AAT GAC TGT GTG GAT GGC AGT GAT GAG CCC GCC AAC TGC ACC CAG	10939
Asp Asn Asp Cys Val Asp Gly Ser Asp Glu Pro Ala Asn Cys Thr Gln	
3480 3485 3490	
ATG ACC TGT GGT GTG GAC GAG TTC CGC TGC AAG GAT TCG GGC CGC TGC	10987
Met Thr Cys Gly Val Asp Glu Phe Arg Cys Lys Asp Ser Gly Arg Cys	
3495 3500 3505	
ATC CCA GCG CGT TGG AAG TGT GAC GGA GAG GAT GAC TGT GGG GAT GGC	11035
Ile Pro Ala Arg Trp Lys Cys Asp Gly Glu Asp Asp Cys Gly Asp Gly	
3510 3515 3520	
TCG GAT GAG CCC AAG GAA GAG TGT GAT GAA CGC ACC TGT GAG CCA TAC	11083
Ser Asp Glu Pro Lys Glu Glu Cys Asp Glu Arg Thr Cys Glu Pro Tyr	
3525 3530 3535	
CAG TTC CGC TGC AAG AAC AAC CGC TGC GTG CCC GGC CGC TGG CAG TGC	11131
Gln Phe Arg Cys Lys Asn Asn Arg Cys Val Pro Gly Arg Trp Gln Cys	
3540 3545 3550 3555	

FIG. 14A

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(Sh et 77 of 91)

GAC	TAC	GAC	AAC	GAT	TGC	GGT	GAC	AAC	TCC	GAT	GAA	GAG	AGC	TGC	ACC	11179
Asp	Tyr	Asp	Asn	Asp	Cys	Gly	Asp	Asn	Ser	Asp	Glu	Glu	Ser	Cys	Thr	
			3560					3565					3570			
CCT	CGG	CCC	TGC	TCC	GAG	AGT	GAG	TTC	TCC	TGT	GCC	AAC	GGC	CGC	TGC	11227
Pro	Arg	Pro	Cys	Ser	Glu	Ser	Glu	Phe	Ser	Cys	Ala	Asn	Gly	Arg	Cys	
		3575					3580					3585				
ATC	GCG	GGG	CGC	TGG	AAA	TGC	GAT	GGA	GAC	CAC	GAC	TGC	GCG	GAC	GGC	11275
Ile	Ala	Gly	Arg	Trp	Lys	Cys	Asp	Gly	Asp	His	Asp	Cys	Ala	Asp	Gly	
	3590					3595			3600							
TCG	GAC	GAG	AAA	GAC	TGC	ACC	CCC	CGC	TGT	GAC	ATG	GAC	CAG	TTC	CAG	11323
Ser	Asp	Glu	Lys	Asp	Cys	Thr	Pro	Arg	Cys	Asp	Met	Asp	Gln	Phe	Gln	
	3605				3610				3615							
TGC	AAG	AGC	GGC	CAC	TGC	ATC	CCC	CTG	CGC	TGG	CGC	TGT	GAC	GCA	GAC	11371
Cys	Lys	Ser	Gly	His	Cys	Ile	Pro	Leu	Arg	Trp	Arg	Cys	Asp	Ala	Asp	
3620				3625				3630					3635			
GCC	GAC	TGC	ATG	GAC	GGC	AGC	GAC	GAG	GAG	GCC	TGC	GGC	ACT	GGC	GTG	11419
Ala	Asp	Cys	Met	Asp	Gly	Ser	Asp	Glu	Glu	Ala	Cys	Gly	Thr	Gly	Val	
			3640					3645					3650			
CGG	ACC	TGC	CCC	CTG	GAC	GAG	TTC	CAG	TGC	AAC	AAC	ACC	TTG	TGC	AAG	11467
Arg	Thr	Cys	Pro	Leu	Asp	Glu	Phe	Gln	Cys	Asn	Asn	Thr	Leu	Cys	Lys	
		3655					3660					3665				
CCG	CTG	GCC	TGG	AAG	TGC	GAT	GGC	GAG	GAT	GAC	TGT	GGG	GAC	AAC	TCA	11515
Pro	Leu	Ala	Trp	Lys	Cys	Asp	Gly	Glu	Asp	Asp	Cys	Gly	Asp	Asn	Ser	
	3670					3675					3680					
GAT	GAG	AAC	CCC	GAG	GAG	TGT	GCC	CGG	TTC	GTG	TGC	CCT	CCC	AAC	CGG	11563
Asp	Glu	Asn	Pro	Glu	Glu	Cys	Ala	Arg	Phe	Val	Cys	Pro	Pro	Asn	Arg	
	3685				3690				3695							
CCC	TTC	CGT	TGC	AAG	AAT	GAC	CGC	GTC	TGT	CTG	TGG	ATC	GGG	CGC	CAA	11611
Pro	Phe	Arg	Cys	Lys	Asn	Asp	Arg	Val	Cys	Leu	Trp	Ile	Gly	Arg	Gln	
3700				3705				3710				3715				
TGC	GAT	GGC	ACG	GAC	AAC	TGT	GGG	GAT	GGG	ACT	GAT	GAA	GAG	GAC	TGT	11659
Cys	Asp	Gly	Thr	Asp	Asn	Cys	Gly	Asp	Gly	Thr	Asp	Glu	Glu	Asp	Cys	
			3720				3725					3730				
GAG	CCC	CCC	ACA	GCC	CAC	ACC	ACC	CAC	TGC	AAA	GAC	AAG	AAG	GAG	TTT	11707
Glu	Pro	Pro	Thr	Ala	His	Thr	Thr	His	Cys	Lys	Asp	Lys	Lys	Glu	Phe	
		3735					3740				3745					
CTG	TGC	CGG	AAC	CAG	CGC	TGC	CTC	TCC	TCC	TCC	CTG	CGC	TGC	AAC	ATG	11755
Leu	Cys	Arg	Asn	Gln	Arg	Cys	Leu	Ser	Ser	Ser	Leu	Arg	Cys	Asn	Met	
	3750					3755					3760					
TTC	GAT	GAC	TGC	GGG	GAC	GGC	TCT	GAC	GAG	GAG	GAC	TGC	AGC	ATC	GAC	11803
Phe	Asp	Asp	Cys	Gly	Asp	Gly	Ser	Asp	Glu	Glu	Asp	Cys	Ser	Ile	Asp	
	3765				3770				3775							
CCC	AAG	CTG	ACC	AGC	TGC	GCC	ACC	AAT	GCC	AGC	ATC	TGT	GGG	GAC	GAG	11851
Pro	Lys	Leu	Thr	Ser	Cys	Ala	Thr	Asn	Ala	Ser	Ile	Cys	Gly	Asp	Glu	
3780				3785					3790				3795			

FIG. 14A

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GCA CGC TGC GTG CGC ACC GAG AAA GCG GCC TAC TGT GCC TGC CGC TCG Ala Arg Cys Val Arg Thr Glu Lys Ala Ala Tyr Cys Ala Cys Arg Ser 3800 3805 3810	11899
GGC TTC CAC ACC GTG CCC GGC CAG CCC GGA TGC CAA GAC ATC AAC GAG Gly Phe His Thr Val Pro Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu 3815 3820 3825	11947
TGC CTG CGC TTC GGC ACC TGC TCC CAG CTC TGC AAC AAC ACC AAG GGC Cys Leu Arg Phe Gly Thr Cys Ser Gln Leu Cys Asn Asn Thr Lys Gly 3830 3835 3840	11995
GGC CAC CTC TGC AGC TGC GCT CGG AAC TTC ATG AAG ACG CAC AAC ACC Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys Thr His Asn Thr 3845 3850 3855	12043
TGC AAG GCC GAA GGC TCT GAG TAC CAG GTC CTG TAC ATC GCT GAT GAC Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr Ile Ala Asp Asp 3860 3865 3870 3875	12091
AAT GAG ATC CGC AGC CTG TTC CCC GGC CAC CCC CAT TCG GCT TAC GAG Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His Ser Ala Tyr Glu 3880 3885 3890	12139
CAG GCA TTC CAG GGT GAC GAG AGT GTC CGC ATT GAT GCT ATG GAT GTC Gln Ala Phe Gln Gly Asp Glu Ser Val Arg Ile Asp Ala Met Asp Val 3895 3900 3905	12187
CAT GTC AAG GCT GGC CGT GTC TAT TGG ACC AAC TGG CAC ACG GGC ACC His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn Trp His Thr Gly Thr 3910 3915 3920	12235
ATC TCC TAC CGC AGC CTG CCA CCT GCT GCG CCT CCT ACC ACT TCC AAC Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala Pro Pro Thr Thr Ser Asn 3925 3930 3935	12283
CGC CAC CGG CGA CAG ATT GAC CGG GGT GTC ACC CAC CTC AAC ATT TCA Arg His Arg Arg Gln Ile Asp Arg Gly Val Thr His Leu Asn Ile Ser 3940 3945 3950 3955	12331
GGG CTG AAG ATG CCC AGA GGC ATC GCC ATC GAC TGG GTG GCC GGA AAC Gly Leu Lys Met Pro Arg Gly Ile Ala Ile Asp Trp Val Ala Gly Asn 3960 3965 3970	12379
GTG TAC TGG ACC GAC TCG GGC CGA GAT GTG ATT GAG GTG GCG CAG ATG Val Tyr Trp Thr Asp Ser Gly Arg Asp Val Ile Glu Val Ala Gln Met 3975 3980 3985	12427
AAG GGC GAG AAC CGC AAG ACG CTC ATC TCG GGC ATG ATT GAC GAG CCC Lys Gly Glu Asn Arg Lys Thr Leu Ile Ser Gly Met Ile Asp Glu Pro 3990 3995 4000	12475
CAC GCC ATT GTG GTG GAC CCA CTG AGG GGG ACC ATG TAC TGG TCA GAC His Ala Ile Val Val Asp Pro Leu Arg Gly Thr Met Tyr Trp Ser Asp 4005 4010 4015	12523
TGG GGC AAC CAC CCC AAG ATT GAG ACG GCA GCG ATG GAT GGG ACG CTT Trp Gly Asn His Pro Lys Ile Glu Thr Ala Ala Met Asp Gly Thr Leu 4020 4025 4030 4035	12571

FIG. 14A

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(Sheet 79 of 91)

CGG	GAG	ACA	CTG	GTG	CAG	GAC	AAC	ATT	CAG	TGG	CCC	ACA	GGC	CTG	GCC	12619
Arg	Glu	Thr	Leu	Val	Gln	Asp	Asn	Ile	Gln	Trp	Pro	Thr	Gly	Leu	Ala	
			4040						4045					4050		
GTG	GAT	TAT	CAC	AAT	GAG	CGG	CTG	TAC	TGG	GCA	GAC	GCC	AAG	CTT	TCA	12667
Val	Asp	Tyr	His	Asn	Glu	Arg	Leu	Tyr	Trp	Ala	Asp	Ala	Lys	Leu	Ser	
			4055					4060					4065			
GTC	ATC	GGC	AGC	ATC	CGG	CTC	AAT	GGC	ACG	GAC	CCC	ATT	GTG	GCT	GCT	12715
Val	Ile	Gly	Ser	Ile	Arg	Leu	Asn	Gly	Thr	Asp	Pro	Ile	Val	Ala	Ala	
		4070					4075					4080				
GAC	AGC	AAA	CGA	GGC	CTA	AGT	CAC	CCC	TTC	AGC	ATC	GAC	GTC	TTT	GAG	12763
Asp	Ser	Lys	Arg	Gly	Leu	Ser	His	Pro	Phe	Ser	Ile	Asp	Val	Phe	Glu	
	4085					4090					4095					
GAT	TAC	ATC	TAT	GGT	GTC	ACC	TAC	ATC	AAT	AAT	CGT	GTC	TTC	AAG	ATC	12811
Asp	Tyr	Ile	Tyr	Gly	Val	Thr	Tyr	Ile	Asn	Asn	Arg	Val	Phe	Lys	Ile	
4100					4105					4110					4115	
CAT	AAG	TTT	GGC	CAC	AGC	CCC	TTG	GTC	AAC	CTG	ACA	GGG	GGC	CTG	AGC	12859
His	Lys	Phe	Gly	His	Ser	Pro	Leu	Val	Asn	Leu	Thr	Gly	Gly	Leu	Ser	
			4120						4125					4130		
CAC	GCC	TCT	GAC	GTG	GTC	CTT	TAC	CAT	CAG	CAC	AAG	CAG	CCC	GAA	GTG	12907
His	Ala	Ser	Asp	Val	Val	Leu	Tyr	His	Gln	His	Lys	Gln	Pro	Glu	Val	
			4135				4140						4145			
ACC	AAC	CCA	TGT	GAC	CGC	AAG	AAA	TGC	GAG	TGG	CTC	TGC	CTG	CTG	AGC	12955
Thr	Asn	Pro	Cys	Asp	Arg	Lys	Lys	Cys	Glu	Trp	Leu	Cys	Leu	Leu	Ser	
		4150					4155					4160				
CCC	AGT	GGG	CCT	GTC	TGC	ACC	TGT	CCC	AAT	GGG	AAG	CGG	CTG	GAC	AAC	13003
Pro	Ser	Gly	Pro	Val	Cys	Thr	Cys	Pro	Asn	Gly	Lys	Arg	Leu	Asp	Asn	
	4165					4170					4175					
GGC	ACA	TGC	GTG	CCT	GTG	CCC	TCT	CCA	ACG	CCC	CCC	CCA	GAT	GCT	CCC	13051
Gly	Thr	Cys	Val	Pro	Val	Pro	Ser	Pro	Thr	Pro	Pro	Pro	Asp	Ala	Pro	
4180				4185					4190					4195		
CGG	CCT	GGA	ACC	TGT	AAC	CTG	CAG	TGC	TTC	AAC	GGT	GGC	AGC	TGT	TTC	13099
Arg	Pro	Gly	Thr	Cys	Asn	Leu	Gln	Cys	Phe	Asn	Gly	Gly	Ser	Cys	Phe	
			4200						4205					4210		
CTC	AAT	GCA	CGG	AGG	CAG	CCC	AAG	TGC	CGC	TGC	CAA	CCC	CGC	TAC	ACG	13147
Leu	Asn	Ala	Arg	Arg	Gln	Pro	Lys	Cys	Arg	Cys	Gln	Pro	Arg	Tyr	Thr	
			4215				4220						4225			
GGT	GAC	AAG	TGT	GAA	CTG	GAC	CAG	TGC	TGG	GAG	CAC	TGT	CGC	AAT	GGG	13195
Gly	Asp	Lys	Cys	Glu	Leu	Asp	Gln	Cys	Trp	Glu	His	Cys	Arg	Asn	Gly	
		4230					4235					4240				
GGC	ACC	TGT	GCT	GCC	TCC	CCC	TCT	GGC	ATG	CCC	ACG	TGC	CGG	TGC	CCC	13243
Gly	Thr	Cys	Ala	Ala	Ser	Pro	Ser	Gly	Met	Pro	Thr	Cys	Arg	Cys	Pro	
	4245					4250					4255					
ACG	GGC	TTC	ACG	GGC	CCC	AAA	TGC	ACC	CAG	CAG	GTG	TGT	GCG	GGC	TAC	13291
Thr	Gly	Phe	Thr	Gly	Pro	Lys	Cys	Thr	Gln	Gln	Val	Cys	Ala	Gly	Tyr	
4260				4265					4270					4275		

FIG. 14A

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TGT	GCC	AAC	AAC	AGC	ACC	TGC	ACT	GTC	AAC	CAG	GGC	AAC	CAG	CCC	CAG	13339
Cys	Ala	Asn	Asn	Ser	Thr	Cys	Thr	Val	Asn	Gln	Gly	Asn	Gln	Pro	Gln	
				4280					4285					4290		
TGC	CGA	TGC	CTA	CCC	GGC	TTC	CTG	GGC	GAC	CGC	TGC	CAG	TAC	CGG	CAG	13387
Cys	Arg	Cys	Leu	Pro	Gly	Phe	Leu	Gly	Asp	Arg	Cys	Gln	Tyr	Arg	Gln	
			4295				4300						4305			
TGC	TCT	GGC	TAC	TGT	GAG	AAC	TTT	GGC	ACA	TGC	CAG	ATG	GCT	GCT	GAT	13435
Cys	Ser	Gly	Tyr	Cys	Glu	Asn	Phe	Gly	Thr	Cys	Gln	Met	Ala	Ala	Asp	
		4310				4315					4320					
GGC	TCC	CGA	CAA	TGC	CGC	TGC	ACT	GCC	TAC	TTT	GAG	GGA	TCG	AGG	TGT	13483
Gly	Ser	Arg	Gln	Cys	Arg	Cys	Thr	Ala	Tyr	Phe	Glu	Gly	Ser	Arg	Cys	
	4325					4330					4335					
GAG	GTG	AAC	AAG	TGC	AGC	CGC	TGT	CTC	GAA	GGG	GCC	TGT	GTG	GTC	AAC	13531
Glu	Val	Asn	Lys	Cys	Ser	Arg	Cys	Leu	Glu	Gly	Ala	Cys	Val	Val	Asn	
4340				4345					4350					4355		
AAG	CAG	AGT	GGG	GAT	GTC	ACC	TGC	AAC	TGC	ACG	GAT	GGC	CGG	GTG	GCC	13579
Lys	Gln	Ser	Gly	Asp	Val	Thr	Cys	Asn	Cys	Thr	Asp	Gly	Arg	Val	Ala	
			4360				4365						4370			
CCC	AGC	TGT	CTG	ACC	TGC	GTC	GGC	CAC	TGC	AGC	AAT	GGC	GGC	TCC	TGT	13627
Pro	Ser	Cys	Leu	Thr	Cys	Val	Gly	His	Cys	Ser	Asn	Gly	Gly	Ser	Cys	
		4375					4380					4385				
ACC	ATG	AAC	AGC	AAA	ATG	ATG	CCT	GAG	TGC	CAG	TGC	CCA	CCC	CAC	ATG	13675
Thr	Met	Asn	Ser	Lys	Met	Met	Pro	Glu	Cys	Gln	Cys	Pro	Pro	His	Met	
		4390				4395					4400					
ACA	GGG	CCC	CGG	TGT	GAG	GAG	CAC	GTC	TTC	AGC	CAG	CAG	CAG	CCA	GGA	13723
Thr	Gly	Pro	Arg	Cys	Glu	Glu	His	Val	Phe	Ser	Gln	Gln	Gln	Pro	Gly	
	4405				4410					4415						
CAT	ATA	GCC	TCC	ATC	CTA	ATC	CCT	CTG	CTG	TTG	CTG	CTG	CTG	CTG	GTT	13771
His	Ile	Ala	Ser	Ile	Leu	Ile	Pro	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Val	
4420				4425				4430					4435			
CTG	GTG	GCC	GGA	GTG	GTA	TTC	TGG	TAT	AAG	CGG	CGA	GTC	CAA	GGG	GCT	13819
Leu	Val	Ala	Gly	Val	Val	Phe	Trp	Tyr	Lys	Arg	Arg	Val	Gln	Gly	Ala	
			4440				4445					4450				
AAG	GGC	TTC	CAG	CAC	CAA	CGG	ATG	ACC	AAC	GGG	GCC	ATG	AAC	GTG	GAG	13867
Lys	Gly	Phe	Gln	His	Gln	Arg	Met	Thr	Asn	Gly	Ala	Met	Asn	Val	Glu	
		4455				4460					4465					
ATT	GGA	AAC	CCC	ACC	TAC	AAG	ATG	TAC	GAA	GGC	GGA	GAG	CCT	GAT	GAT	13915
Ile	Gly	Asn	Pro	Thr	Tyr	Lys	Met	Tyr	Glu	Gly	Gly	Glu	Pro	Asp	Asp	
		4470				4475					4480					
GTG	GGA	GGC	CTA	CTG	GAC	GCT	GAC	TTT	GCC	CTG	GAC	CCT	GAC	AAG	CCC	13963
Val	Gly	Gly	Leu	Leu	Asp	Ala	Asp	Phe	Ala	Leu	Asp	Pro	Asp	Lys	Pro	
	4485				4490					4495						
ACC	AAC	TTC	ACC	AAC	CCC	GTG	TAT	GCC	ACA	CTC	TAC	ATG	GGG	GGC	CAT	14011
Thr	Asn	Phe	Thr	Asn	Pro	Val	Tyr	Ala	Thr	Leu	Tyr	Met	Gly	Gly	His	
4500				4505				4510					4515			

FIG. 14A

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GGC AGT CGC CAC TCC CTG GCC AGC ACG GAC GAG AAG CGA GAA CTC CTG	14059
Gly Ser Arg His Ser Leu Ala Ser Thr Asp Glu Lys Arg Glu Leu Leu	
4520 4525 4530	
GGC CGG GGC CCT GAG GAC GAG ATA GGG GAC CCC TTG GCA TAGGGCCCTG CC	14110
CCGTCGGACT GCCCCAGAA AGCCTCCTGC CCCCTGCCGG TGAAGTCCTT CAGTGAGCCC	14170
Gly Arg Gly Pro Glu Asp Glu Ile Gly Asp Pro Leu Ala	
4535 4540	
CTCCCCAGCC AGCCCTTCCC TGGCCCCGCC GGATGTATAA ATGTAAAAAT GAAGGAATTA	14230
CATTTTATAT GTGAGCGAGC AAGCCGGCAA GCGAGCACAG TATTATTTCT CCATCCCCTC	14290
CCTGCCTGCT CCTTGGCACC CCCATGCTGC CTTCAGGGAG ACAGGCAGGG AGGGCTTGGG	14350
GCTGCACCTC CTACCCTCCC ACCAGAACGC ACCCCACTGG GAGAGCTGGT GGTGCAGCCT	14410
TCCCCTCCCT GTATAAGACA CTTTGCCAAG GCTCTCCCCT CTCGCCCCAT CCCTGCTTGC	14470
CCGCTCCAC AGCTTCCTGA GGGCTAATTC TGGGAAGGGA GAGTTCCTTT CTGCCCCTGT	14530
CTGGAAGACG TGGCTCTGGG TGAGGTAGGC GGGAAAGGAT GGAGTGTTTT AGTTCTTGGG	14590
GGAGGCCACC CCAAACCCCA GCCCCAATC CAGGGGCACC TATGAGATGG CCATGCTCAA	14650
CCCCCTCCC AGACAGGCCC TCCCTGTCTC CAGGGCCCCC ACCGAGGTTC CCAGGGCTGG	14710
AGACTTCCTC TGGTAAACAT TCCTCCAGCC TCCCCTCCCC TGGGGACGCC AAGGAGGTGG	14770
GCCACACCCA GGAAGGGAAA GCGGGCAGCC CCGTTTTGGG GACGTGAACG TTTTAATAAT	14830
TTTTGCTGAA TTCTTTACAA CTAAATAACA CAGATATTCT TATAAATAAA ATTGTAAAAA	14890
AAAAAA	14896

FIG. 14A

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Met	Leu	Thr	Pro	Pro	Leu	Leu	Leu	Leu	Leu	Pro	Leu	Leu	Ser	Ala	Leu
1				5				10						15	
Val	Ala	Ala	Ala	Ile	Asp	Ala	Pro	Lys	Thr	Cys	Ser	Pro	Lys	Gln	Phe
			20					25					30		
Ala	Cys	Arg	Asp	Gln	Ile	Thr	Cys	Ile	Ser	Lys	Gly	Trp	Arg	Cys	Asp
		35					40					45			
Gly	Glu	Arg	Asp	Cys	Pro	Asp	Gly	Ser	Asp	Glu	Ala	Pro	Glu	Ile	Cys
	50					55				60					
Pro	Gln	Ser	Lys	Ala	Gln	Arg	Cys	Gln	Pro	Asn	Glu	His	Asn	Cys	Leu
65					70				75					80	
Gly	Thr	Glu	Leu	Cys	Val	Pro	Met	Ser	Arg	Leu	Cys	Asn	Gly	Val	Gln
			85					90					95		
Asp	Cys	Met	Asp	Gly	Ser	Asp	Glu	Gly	Pro	His	Cys	Arg	Glu	Leu	Gln
			100					105					110		
Gly	Asn	Cys	Ser	Arg	Leu	Gly	Cys	Gln	His	His	Cys	Val	Pro	Thr	Leu
		115					120					125			
Asp	Gly	Pro	Thr	Cys	Tyr	Cys	Asn	Ser	Ser	Phe	Gln	Leu	Gln	Ala	Asp
	130					135					140				
Gly	Lys	Thr	Cys	Lys	Asp	Phe	Asp	Glu	Cys	Ser	Val	Tyr	Gly	Thr	Cys
145					150					155					160
Ser	Gln	Leu	Cys	Thr	Asn	Thr	Asp	Gly	Ser	Phe	Ile	Cys	Gly	Cys	Val
				165				170					175		
Glu	Gly	Tyr	Leu	Leu	Gln	Pro	Asp	Asn	Arg	Ser	Cys	Lys	Ala	Lys	Asn
			180					185					190		
Glu	Pro	Val	Asp	Arg	Pro	Pro	Val	Leu	Leu	Ile	Ala	Asn	Ser	Gln	Asn
		195					200					205			
Ile	Leu	Ala	Thr	Tyr	Leu	Ser	Gly	Ala	Gln	Val	Ser	Thr	Ile	Thr	Pro
	210					215						220			
Thr	Ser	Thr	Arg	Gln	Thr	Thr	Ala	Met	Asp	Phe	Ser	Tyr	Ala	Asn	Glu
225					230					235					240
Thr	Val	Cys	Trp	Val	His	Val	Gly	Asp	Ser	Ala	Ala	Gln	Thr	Gln	Leu
				245				250						255	
Lys	Cys	Ala	Arg	Met	Pro	Gly	Leu	Lys	Gly	Phe	Val	Asp	Glu	His	Thr
			260					265					270		
Ile	Asn	Ile	Ser	Leu	Ser	Leu	His	His	Val	Glu	Gln	Met	Ala	Ile	Asp
		275					280					285			
Trp	Leu	Thr	Gly	Asn	Phe	Tyr	Phe	Val	Asp	Asp	Ile	Asp	Asp	Arg	Ile
	290					295					300				
Phe	Val	Cys	Asn	Arg	Asn	Gly	Asp	Thr	Cys	Val	Thr	Leu	Leu	Asp	Leu
305					310					315					320
Glu	Leu	Tyr	Asn	Pro	Lys	Gly	Ile	Ala	Leu	Asp	Pro	Ala	Met	Gly	Lys
				325				330						335	
Val	Phe	Phe	Thr	Asp	Tyr	Gly	Gln	Ile	Pro	Lys	Val	Glu	Arg	Cys	Asp
			340					345					350		
Met	Asp	Gly	Gln	Asn	Arg	Thr	Lys	Leu	Val	Asp	Ser	Lys	Ile	Val	Phe
		355					360					365			
Pro	His	Gly	Ile	Thr	Leu	Asp	Leu	Val	Ser	Arg	Leu	Val	Tyr	Trp	Ala
		370				375					380				
Asp	Ala	Tyr	Leu	Asp	Tyr	Ile	Glu	Val	Val	Asp	Tyr	Glu	Gly	Lys	Gly
385					390					395					400
Arg	Gln	Thr	Ile	Ile	Gln	Gly	Ile	Leu	Ile	Glu	His	Leu	Tyr	Gly	Leu
				405				410						415	
Thr	Val	Phe	Glu	Asn	Tyr	Leu	Tyr	Ala	Thr	Asn	Ser	Asp	Asn	Ala	Asn
			420					425					430		
Ala	Gln	Gln	Lys	Thr	Ser	Val	Ile	Arg	Val	Asn	Arg	Phe	Asn	Ser	Thr
		435					440					445			
Glu	Tyr	Gln	Val	Val	Thr	Arg	Val	Asp	Lys	Gly	Gly	Ala	Leu	His	Ile
	450					455					460				

FIG. 14B

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Tyr	His	Gln	Arg	Arg	Gln	Pro	Arg	Val	Arg	Ser	His	Ala	Cys	Glu	Asn
465					470					475					480
Asp	Gln	Tyr	Gly	Lys	Pro	Gly	Gly	Cys	Ser	Asp	Ile	Cys	Leu	Leu	Ala
				485					490						495
Asn	Ser	His	Lys	Ala	Arg	Thr	Cys	Arg	Cys	Arg	Ser	Gly	Phe	Ser	Leu
			500					505					510		
Gly	Ser	Asp	Gly	Lys	Ser	Cys	Lys	Lys	Pro	Glu	His	Glu	Leu	Phe	Leu
		515					520					525			
Val	Tyr	Gly	Lys	Gly	Arg	Pro	Gly	Ile	Ile	Arg	Gly	Met	Asp	Met	Gly
	530					535					540				
Ala	Lys	Val	Pro	Asp	Glu	His	Met	Ile	Pro	Ile	Glu	Asn	Leu	Met	Asn
545					550					555					560
Pro	Arg	Ala	Leu	Asp	Phe	His	Ala	Glu	Thr	Gly	Phe	Ile	Tyr	Phe	Ala
				565					570						575
Asp	Thr	Thr	Ser	Tyr	Leu	Ile	Gly	Arg	Gln	Lys	Ile	Asp	Gly	Thr	Glu
			580					585					590		
Arg	Glu	Thr	Ile	Leu	Lys	Asp	Gly	Ile	His	Asn	Val	Glu	Gly	Val	Ala
		595					600					605			
Val	Asp	Trp	Met	Gly	Asp	Asn	Leu	Tyr	Trp	Thr	Asp	Asp	Gly	Pro	Lys
	610					615					620				
Lys	Thr	Ile	Ser	Val	Ala	Arg	Leu	Glu	Lys	Ala	Ala	Gln	Thr	Arg	Lys
625					630					635					640
Thr	Leu	Ile	Glu	Gly	Lys	Met	Thr	His	Pro	Arg	Ala	Ile	Val	Val	Asp
				645					650						655
Pro	Leu	Asn	Gly	Trp	Met	Tyr	Trp	Thr	Asp	Trp	Glu	Glu	Asp	Pro	Lys
			660					665					670		
Asp	Ser	Arg	Arg	Gly	Arg	Leu	Glu	Arg	Ala	Trp	Met	Asp	Gly	Ser	His
		675					680					685			
Arg	Asp	Ile	Phe	Val	Thr	Ser	Lys	Thr	Val	Leu	Trp	Pro	Asn	Gly	Leu
	690					695					700				
Ser	Leu	Asp	Ile	Pro	Ala	Gly	Arg	Leu	Tyr	Trp	Val	Asp	Ala	Phe	Tyr
705					710					715					720
Asp	Arg	Ile	Glu	Thr	Ile	Leu	Leu	Asn	Gly	Thr	Asp	Arg	Lys	Ile	Val
				725					730						735
Tyr	Glu	Gly	Pro	Glu	Leu	Asn	His	Ala	Phe	Gly	Leu	Cys	His	His	Gly
			740					745					750		
Asn	Tyr	Leu	Phe	Trp	Thr	Glu	Tyr	Arg	Ser	Gly	Ser	Val	Tyr	Arg	Leu
		755					760						765		
Glu	Arg	Gly	Val	Gly	Gly	Ala	Pro	Pro	Thr	Val	Thr	Leu	Leu	Arg	Ser
		770				775						780			
Glu	Arg	Pro	Pro	Ile	Phe	Glu	Ile	Arg	Met	Tyr	Asp	Ala	Gln	Gln	Gln
785					790					795					800
Gln	Val	Gly	Thr	Asn	Lys	Cys	Arg	Val	Asn	Asn	Gly	Gly	Cys	Ser	Ser
				805					810						815
Leu	Cys	Leu	Ala	Thr	Pro	Gly	Ser	Arg	Gln	Cys	Ala	Cys	Ala	Glu	Asp
			820					825					830		
Gln	Val	Leu	Asp	Ala	Asp	Gly	Val	Thr	Cys	Leu	Ala	Asn	Pro	Ser	Tyr
		835					840					845			
Val	Pro	Pro	Pro	Gln	Cys	Gln	Pro	Gly	Glu	Phe	Ala	Cys	Ala	Asn	Ser
850							855					860			
Arg	Cys	Ile	Gln	Glu	Arg	Trp	Lys	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Leu
865					870					875					880
Asp	Asn	Ser	Asp	Glu	Ala	Pro	Ala	Leu	Cys	His	Gln	His	Thr	Cys	Pro
				885					890					895	
Ser	Asp	Arg	Phe	Lys	Cys	Glu	Asn	Asn	Arg	Cys	Ile	Pro	Asn	Arg	Trp
				900					905				910		
Leu	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Gly	Asn	Ser	Glu	Asp	Glu	Ser	Asn
				915				920					925		

FIG. 14B

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Ala	Thr	Cys	Ser	Ala	Arg	Thr	Cys	Pro	Pro	Asn	Gln	Phe	Ser	Cys	Ala
930						935					940				
Ser	Gly	Arg	Cys	Ile	Pro	Ile	Ser	Trp	Thr	Cys	Asp	Leu	Asp	Asp	Asp
945				950						955					960
Cys	Gly	Asp	Arg	Ser	Asp	Glu	Ser	Ala	Ser	Cys	Ala	Tyr	Pro	Thr	Cys
				965					970						975
Phe	Pro	Leu	Thr	Gln	Phe	Thr	Cys	Asn	Asn	Gly	Arg	Cys	Ile	Asn	Ile
			980				985						990		
Asn	Trp	Arg	Cys	Asp	Asn	Asp	Asn	Asp	Cys	Gly	Asp	Asn	Ser	Asp	Glu
		995				1000						1005			
Ala	Gly	Cys	Ser	His	Ser	Cys	Ser	Ser	Thr	Gln	Phe	Lys	Cys	Asn	Ser
1010						1015					1020				
Gly	Arg	Cys	Ile	Pro	Glu	His	Trp	Thr	Cys	Asp	Gly	Asp	Asn	Asp	Cys
025				1030						1035					1040
Gly	Asp	Tyr	Ser	Asp	Glu	Thr	His	Ala	Asn	Cys	Thr	Asn	Gln	Ala	Thr
				1045					1050					1055	
Arg	Pro	Pro	Gly	Gly	Cys	His	Thr	Asp	Glu	Phe	Gln	Cys	Arg	Leu	Asp
			1060					1065					1070		
Gly	Leu	Cys	Ile	Pro	Leu	Arg	Trp	Arg	Cys	Asp	Gly	Asp	Thr	Asp	Cys
			1075			1080					1085				
Met	Asp	Ser	Ser	Asp	Glu	Lys	Ser	Cys	Glu	Gly	Val	Thr	His	Val	Cys
1090						1095					1100				
Asp	Pro	Ser	Val	Lys	Phe	Gly	Cys	Lys	Asp	Ser	Ala	Arg	Cys	Ile	Ser
105				1110						1115					1120
Lys	Ala	Trp	Val	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Glu	Asp	Asn	Ser	Asp
				1125					1130						1135
Glu	Glu	Asn	Cys	Glu	Ser	Leu	Ala	Cys	Arg	Pro	Pro	Ser	His	Pro	Cys
			1140				1145						1150		
Ala	Asn	Asn	Thr	Ser	Val	Cys	Leu	Pro	Pro	Asp	Lys	Leu	Cys	Asp	Gly
		1155				1160						1165			
Asn	Asp	Asp	Cys	Gly	Asp	Gly	Ser	Asp	Glu	Gly	Glu	Leu	Cys	Asp	Gln
		1170				1175					1180				
Cys	Ser	Leu	Asn	Asn	Gly	Gly	Cys	Ser	His	Asn	Cys	Ser	Val	Ala	Pro
185				1190					1195						1200
Gly	Glu	Gly	Ile	Val	Cys	Ser	Cys	Pro	Leu	Gly	Met	Glu	Leu	Gly	Pro
			1205						1210						1215
Asp	Asn	His	Thr	Cys	Gln	Ile	Gln	Ser	Tyr	Cys	Ala	Lys	His	Leu	Lys
			1220					1225					1230		
Cys	Ser	Gln	Lys	Cys	Asp	Gln	Asn	Lys	Phe	Ser	Val	Lys	Cys	Ser	Cys
		1235				1240						1245			
Tyr	Glu	Gly	Trp	Val	Leu	Glu	Pro	Asp	Gly	Glu	Ser	Cys	Arg	Ser	Leu
		1250				1255					1260				
Asp	Pro	Phe	Lys	Pro	Phe	Ile	Ile	Phe	Ser	Asn	Arg	His	Glu	Ile	Arg
265				1270					1275						1280
Arg	Ile	Asp	Leu	His	Lys	Gly	Asp	Tyr	Ser	Val	Leu	Val	Pro	Gly	Leu
			1285					1290							1295
Arg	Asn	Thr	Ile	Ala	Leu	Asp	Phe	His	Leu	Ser	Gln	Ser	Ala	Leu	Tyr
		1300					1305						1310		
Trp	Thr	Asp	Val	Val	Glu	Asp	Lys	Ile	Tyr	Arg	Gly	Lys	Leu	Leu	Asp
		1315				1320						1325			
Asn	Gly	Ala	Leu	Thr	Ser	Phe	Glu	Val	Val	Ile	Gln	Tyr	Gly	Leu	Ala
		1330				1335					1340				
Thr	Pro	Glu	Gly	Leu	Ala	Val	Asp	Trp	Ile	Ala	Gly	Asn	Ile	Tyr	Trp
345				1350					1355						1360
Val	Glu	Ser	Asn	Leu	Asp	Gln	Ile	Glu	Val	Ala	Lys	Leu	Asp	Gly	Thr
			1365					1370					1375		
Leu	Arg	Thr	Thr	Leu	Leu	Ala	Gly	Asp	Ile	Glu	His	Pro	Arg	Ala	Ile
			1380				1385						1390		

FIG. 14B

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Ala Leu Asp Pro Arg Asp Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala
 1395 1400 1405
 Ser Leu Pro Arg Ile Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg
 1410 1415 1420
 Thr Val His Arg Glu Thr Gly Ser Gly Gly Trp Pro Asn Gly Leu Thr
 425 1430 1435 1440
 Val Asp Tyr Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser Asp
 1445 1450 1455
 Ala Ile Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val Leu
 1460 1465 1470
 Arg Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr Gly
 1475 1480 1485
 Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys Ala
 1490 1495 1500
 Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr Asn Thr
 505 1510 1515 1520
 Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln Pro Met Ala
 1525 1530 1535
 Pro Asn Pro Cys Glu Ala Asn Gly Gly Gln Gly Pro Cys Ser His Leu
 1540 1545 1550
 Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Cys Ala Cys Pro His Leu
 1555 1560 1565
 Met Lys Leu His Lys Asp Asn Thr Thr Cys Tyr Glu Phe Lys Lys Phe
 1570 1575 1580
 Leu Leu Tyr Ala Arg Gln Met Glu Ile Arg Gly Val Asp Leu Asp Ala
 585 1590 1595 1600
 Pro Tyr Tyr Asn Tyr Ile Ile Ser Phe Thr Val Pro Asp Ile Asp Asn
 1605 1610 1615
 Val Thr Val Leu Asp Tyr Asp Ala Arg Glu Gln Arg Val Tyr Trp Ser
 1620 1625 1630
 Asp Val Arg Thr Gln Ala Ile Lys Arg Ala Phe Ile Asn Gly Thr Gly
 1635 1640 1645
 Val Glu Thr Val Val Ser Ala Asp Leu Pro Asn Ala His Gly Leu Ala
 1650 1655 1660
 Val Asp Trp Val Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr Asn
 665 1670 1675 1680
 Lys Lys Gln Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn Ala
 1685 1690 1695
 Val Val Gln Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro Leu
 1700 1705 1710
 Arg Gly Lys Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala Asn
 1715 1720 1725
 Met Asp Gly Ser Asn Arg Thr Leu Leu Phe Ser Gly Gln Lys Gly Pro
 1730 1735 1740
 Val Gly Leu Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp Ile Ser
 745 1750 1755 1760
 Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly Ser Gly Leu
 1765 1770 1775
 Glu Val Ile Asp Ala Met Arg Ser Gln Leu Gly Lys Ala Thr Ala Leu
 1780 1785 1790
 Ala Ile Met Gly Asp Lys Leu Trp Trp Ala Asp Gln Val Ser Glu Lys
 1795 1800 1805
 Met Gly Thr Cys Ser Lys Ala Asp Gly Ser Gly Ser Val Val Leu Arg
 1810 1815 1820
 Asn Ser Thr Thr Leu Val Met His Met Lys Val Tyr Asp Glu Ser Ile
 825 1830 1835 1840
 Gln Leu Asp His Lys Gly Thr Asn Pro Cys Ser Val Asn Asn Gly Asp
 1845 1850 1855
 Cys Ser Gln Leu Cys Leu Pro Thr Ser Glu Thr Thr Arg Ser Cys Met

FIG. 14B

1860 Cys Thr Ala Gly Tyr Ser Leu Arg Ser Gly Gln Gln Ala Cys Glu Gly
 1875 Val Gly Ser Phe Leu Leu Tyr Ser Val His Glu Gly Ile Arg Gly Ile
 1880 1885
 1890 Pro Leu Asp Pro Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser Gly
 1895 1900
 905 Thr Ser Leu Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr Ile
 1910 1915 1920
 1925 Tyr Trp Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg Asp
 1930 1935
 1940 Gln Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val Glu
 1945 1950
 1955 Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp Gln
 1960 1965
 1970 Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe Arg Tyr
 1975 1980
 985 Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile Thr Val His
 1990 1995 2000
 2005 Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly Gln Tyr Pro Arg
 2010 2015
 2020 Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg Val Val Leu Val Asn
 2025 2030
 2035 Val Ser Ile Ser Trp Pro Asn Gly Ile Ser Val Asp Tyr Gln Asp Gly
 2040 2045
 2050 Lys Leu Tyr Trp Cys Asp Ala Arg Thr Asp Lys Ile Glu Arg Ile Asp
 2055 2060
 065 Leu Glu Thr Gly Glu Asn Arg Glu Val Val Leu Ser Ser Asn Asn Met
 2070 2075 2080
 2085 Asp Met Phe Ser Val Ser Val Phe Glu Asp Phe Ile Tyr Trp Ser Asp
 2090 2095
 2100 Arg Thr His Ala Asn Gly Ser Ile Lys Arg Gly Ser Lys Asp Asn Ala
 2105 2110
 2115 Thr Asp Ser Val Pro Leu Arg Thr Gly Ile Gly Val Gln Leu Lys Asp
 2120 2125
 2130 Ile Lys Val Phe Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys Ala
 2135 2140
 145 Val Ala Asn Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Arg Gly
 2150 2155 2160
 2165 Gln Arg Ala Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly Ala
 2170 2175
 2180 Ser Cys Arg Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr Ile
 2185 2190
 2195 Leu Lys Ser Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro Val
 2200 2205
 2210 Gln Pro Phe Glu Asp Pro Glu His Met Lys Asn Val Ile Ala Leu Ala
 2215 2220
 225 Phe Asp Tyr Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn Arg Ile Phe
 2230 2235 2240
 2245 Phe Ser Asp Ile His Phe Gly Asn Ile Gln Gln Ile Asn Asp Asp Gly
 2250 2255
 2260 Ser Arg Arg Ile Thr Ile Val Glu Asn Val Gly Ser Val Glu Gly Leu
 2265 2270
 2275 Ala Tyr His Arg Gly Trp Asp Thr Leu Tyr Trp Thr Ser Tyr Thr Thr
 2280 2285 2300
 2290 Ser Thr Ile Thr Arg His Thr Val Asp Gln Thr Arg Pro Gly Ala Phe
 2310 2315 2320
 305 Glu Arg Glu Thr Val Ile Thr Met Ser Gly Asp Asp His Pro Arg Ala
 2325 2330 2335

FIG. 14B

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Phe Val Leu Asp Glu Cys Gln Asn Leu Met Phe Trp Thr Asn Trp Asn
2340 2345 2350
Glu Gln His Pro Ser Ile Met Arg Ala Ala Leu Ser Gly Ala Asn Val
2355 2360 2365
Leu Thr Leu Ile Glu Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile
2370 2375 2380
Asp His Arg Ala Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys
385 2390 2395 2400
Ile Glu Arg Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys
2405 2410 2415
Ser Glu Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile
2420 2425 2430
Phe Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
2435 2440 2445
Val Gly Ser Asn Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln Pro
2450 2455 2460
Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu Leu Ser
465 2470 2475 2480
Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys Leu Leu Thr
2485 2490 2495
His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly Arg Ile Leu Gln
2500 2505 2510
Asp Asp Leu Thr Cys Arg Ala Val Asn Ser Ser Cys Arg Ala Gln Asp
2515 2520 2525
Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile Asn Phe Ser Leu Thr Cys
2530 2535 2540
Asp Gly Val Pro His Cys Lys Asp Lys Ser Asp Glu Lys Pro Ser Tyr
545 2550 2555 2560
Cys Asn Ser Arg Arg Cys Lys Lys Thr Phe Arg Gln Cys Ser Asn Gly
2565 2570 2575
Arg Cys Val Ser Asn Met Leu Trp Cys Asn Gly Ala Asp Asp Cys Gly
2580 2585 2590
Asp Gly Ser Asp Glu Ile Pro Cys Asn Lys Thr Ala Cys Gly Val Gly
2595 2600 2605
Glu Phe Arg Cys Arg Asp Gly Thr Cys Ile Gly Asn Ser Ser Arg Cys
2610 2615 2620
Asn Gln Phe Val Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys Ser
625 2630 2635 2640
Ala Thr Asp Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val Leu
2645 2650 2655
Phe Gln Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp Val
2660 2665 2670
Cys Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp Cys
2675 2680 2685
Pro Gly Val Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys Pro
2690 2695 2700
Ser Gly Arg Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu Asp Asp
705 2710 2715 2720
Cys Glu His Gly Glu Asp Glu Thr His Cys Asn Lys Phe Cys Ser Glu
2725 2730 2735
Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser Lys Gln Trp Leu
2740 2745 2750
Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser Asp Glu Ala Ala His
2755 2760 2765
Cys Glu Gly Lys Thr Cys Gly Pro Ser Ser Phe Ser Cys Pro Gly Thr
2770 2775 2780
His Val Cys Val Pro Glu Arg Trp Leu Cys Asp Gly Asp Lys Asp Cys
785 2790 2795 2800
Ala Asp Gly Ala Asp Glu Ser Ile Ala Ala Gly Cys Leu Tyr Asn Ser

FIG. 14B

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2805 Thr Cys Asp Asp Arg Glu Phe Met Cys 2810 Gln Asn Arg Gln Cys 2815 Ile Pro
 2820 Lys His Phe Val Cys Asp His Asp 2825 Arg Asp Cys Ala Asp 2830 Gly Ser Asp
 2835 Glu Ser Pro Glu Cys Glu Tyr Pro 2840 Thr Cys Gly Pro Ser Glu Phe Arg
 2850 Cys Ala Asn Gly Arg Cys Leu Ser Ser 2855 Arg Gln Trp Glu Cys Asp Gly
 865 2870 Glu Asn Asp Cys His Asp Gln Ser Asp 2875 Glu Ala Pro Lys Asn Pro His
 2885 Cys Thr Ser Pro Glu His Lys Cys 2890 Asn Ala Ser Ser Gln Phe Leu Cys
 2900 Ser Ser Gly Arg Cys Val Ala Glu 2905 Ala Leu Leu Cys Asn Gly Gln Asp
 2915 Asp Cys Gly Asp Ser Ser Asp 2920 Glu Arg Gly Cys His Ile Asn Glu Cys
 2930 Leu Ser Arg Lys Leu Ser Gly Cys Ser 2935 Gln Asp Cys Glu Asp Leu Lys
 945 2950 Ile Gly Phe Lys Cys Arg Cys Arg 2955 Pro Gly Phe Arg Leu Lys Asp Asp
 2965 Gly Arg Thr Cys Ala Asp Val Asp 2970 Glu Cys Ser Thr Thr Phe Pro Cys
 2980 Ser Gln Arg Cys Ile Asn Thr His 2985 Gly Ser Tyr Lys Cys Leu Cys Val
 2995 Glu Gly Tyr Ala Pro Arg Gly 3000 Gly Asp Pro His Ser Cys Lys Ala Val
 3010 Thr Asp Glu Glu Pro Phe Leu Ile 3015 Phe Ala Asn Arg Tyr Tyr Leu Arg
 025 3030 Lys Leu Asn Leu Asp Gly Ser Asn 3035 Tyr Thr Leu Leu Lys Gln Gly Leu
 3045 Asn Asn Ala Val Ala Leu Asp Phe 3050 Asp Tyr Arg Glu Gln Met Ile Tyr
 3060 Trp Thr Asp Val Thr Thr Gln Gly 3065 Ser Met Ile Arg Arg Met His Leu
 3075 Asn Gly Ser Asn Val Gln Val Leu 3080 His Arg Thr Gly Leu Ser Asn Pro
 3090 Asp Gly Leu Ala Val Asp Trp Val 3095 Gly Gly Asn Leu Tyr Trp Cys Asp
 105 3110 Lys Gly Arg Asp Thr Ile Glu Val 3115 Ser Lys Leu Asn Gly Ala Tyr Arg
 3125 Thr Val Leu Val Ser Ser Gly Leu 3130 Arg Glu Pro Arg Ala Leu Val Val
 3140 Asp Val Gln Asn Gly Tyr Leu Tyr 3145 Trp Thr Asp Trp Gly Asp His Ser
 3155 Leu Ile Gly Arg Ile Gly Met Asp 3160 Gly Ser Ser Arg Ser Val Ile Val
 3170 Asp Thr Lys Ile Thr Trp Pro Asn 3175 Gly Leu Thr Leu Asp Tyr Val Thr
 185 3190 Glu Arg Ile Tyr Trp Ala Asp 3195 Ala Arg Glu Asp Tyr Ile Glu Phe Ala
 3205 Ser Leu Asp Gly Ser Asn Arg His 3210 Val Val Leu Ser Gln Asp Ile Pro
 3220 His Ile Phe Ala Leu Thr Leu Phe 3225 Glu Asp Tyr Val Tyr Trp Thr Asp
 3235 Trp Glu Thr Lys Ser Ile Asn Arg 3240 Ala His Lys Thr Thr Gly Thr Asn
 3250 Lys Thr Leu Leu Ile Ser Thr Leu 3255 His Arg Pro Met Asp Leu His Val
 265 3270 3275 3280

FIG. 14B

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Phe His Ala Leu Arg Gln Pro Asp Val Pro Asn His Pro Cys Lys Val
3285 3290 3295
Asn Asn Gly Gly Cys Ser Asn Leu Cys Leu Leu Ser Pro Gly Gly Gly
3300 3305 3310
His Lys Cys Ala Cys Pro Thr Asn Phe Tyr Leu Gly Ser Asp Gly Arg
3315 3320 3325
Thr Cys Val Ser Asn Cys Thr Ala Ser Gln Phe Val Cys Lys Asn Asp
3330 3335 3340
Lys Cys Ile Pro Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys Gly
345 3350 3355 3360
Asp His Ser Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg Pro
3365 3370 3375
Gly Gln Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe Ile
3380 3385 3390
Cys Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn Cys
3395 3400 3405
Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr Asn
3410 3415 3420
Arg Cys Ile Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn Cys Gly
425 3430 3435 3440
Asp Gly Glu Asp Glu Arg Asp Cys Pro Glu Val Thr Cys Ala Pro Asn
3445 3450 3455
Gln Phe Gln Cys Ser Ile Thr Lys Arg Cys Ile Pro Arg Val Trp Val
3460 3465 3470
Cys Asp Arg Asp Asn Asp Cys Val Asp Gly Ser Asp Glu Pro Ala Asn
3475 3480 3485
Cys Thr Gln Met Thr Cys Gly Val Asp Glu Phe Arg Cys Lys Asp Ser
3490 3495 3500
Gly Arg Cys Ile Pro Ala Arg Trp Lys Cys Asp Gly Glu Asp Asp Cys
505 3510 3515 3520
Gly Asp Gly Ser Asp Glu Pro Lys Glu Glu Cys Asp Glu Arg Thr Cys
3525 3530 3535
Glu Pro Tyr Gln Phe Arg Cys Lys Asn Asn Arg Cys Val Pro Gly Arg
3540 3545 3550
Trp Gln Cys Asp Tyr Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu Glu
3555 3560 3565
Ser Cys Thr Pro Arg Pro Cys Ser Glu Ser Glu Phe Ser Cys Ala Asn
3570 3575 3580
Gly Arg Cys Ile Ala Gly Arg Trp Lys Cys Asp Gly Asp His Asp Cys
585 3590 3595 3600
Ala Asp Gly Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met Asp
3605 3610 3615
Gln Phe Gln Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Arg Cys
3620 3625 3630
Asp Ala Asp Ala Asp Cys Met Asp Gly Ser Asp Glu Glu Ala Cys Gly
3635 3640 3645
Thr Gly Val Arg Thr Cys Pro Leu Asp Glu Phe Gln Cys Asn Asn Thr
3650 3655 3660
Leu Cys Lys Pro Leu Ala Trp Lys Cys Asp Gly Glu Asp Asp Cys Gly
665 3670 3675 3680
Asp Asn Ser Asp Glu Asn Pro Glu Glu Cys Ala Arg Phe Val Cys Pro
3685 3690 3695
Pro Asn Arg Pro Phe Arg Cys Lys Asn Asp Arg Val Cys Leu Trp Ile
3700 3705 3710
Gly Arg Gln Cys Asp Gly Thr Asp Asn Cys Gly Asp Gly Thr Asp Glu
3715 3720 3725
Glu Asp Cys Glu Pro Pro Thr Ala His Thr Thr His Cys Lys Asp Lys
3730 3735 3740
Lys Glu Phe Leu Cys Arg Asn Gln Arg Cys Leu Ser Ser Ser Leu Arg

FIG. 14B

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(Sh et 90 of 91)

745 3750 3755 3760
 Cys Asn Met Phe Asp Asp Cys Gly Asp Gly Ser Asp Glu Glu Asp Cys
 Ser Ile Asp Pro Lys Leu Thr Ser Cys Ala Thr Asn Ala Ser Ile Cys
 Gly Asp Glu Ala Arg Cys Val Arg Thr Glu Lys Ala Ala Tyr Cys Ala
 Cys Arg Ser Gly Phe His Thr Val Pro Gly Gln Pro Gly Cys Gln Asp
 Ile Asn Glu Cys Leu Arg Phe Gly Thr Cys Ser Gln Leu Cys Asn Asn
 Thr Lys Gly Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys Thr
 His Asn Thr Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr Ile
 Ala Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His Ser
 Ala Tyr Glu Gln Ala Phe Gln Gly Asp Glu Ser Val Arg Ile Asp Ala
 Met Asp Val His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn Trp His
 Thr Gly Thr Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala Pro Pro Thr
 Thr Ser Asn Arg His Arg Arg Gln Ile Asp Arg Gly Val Thr His Leu
 Asn Ile Ser Gly Leu Lys Met Pro Arg Gly Ile Ala Ile Asp Trp Val
 Ala Gly Asn Val Tyr Trp Thr Asp Ser Gly Arg Asp Val Ile Glu Val
 Ala Gln Met Lys Gly Glu Asn Arg Lys Thr Leu Ile Ser Gly Met Ile
 Asp Glu Pro His Ala Ile Val Val Asp Pro Leu Arg Gly Thr Met Tyr
 Trp Ser Asp Trp Gly Asn His Pro Lys Ile Glu Thr Ala Ala Met Asp
 Gly Thr Leu Arg Glu Thr Leu Val Gln Asp Asn Ile Gln Trp Pro Thr
 Gly Leu Ala Val Asp Tyr His Asn Glu Arg Leu Tyr Trp Ala Asp Ala
 Lys Leu Ser Val Ile Gly Ser Ile Arg Leu Asn Gly Thr Asp Pro Ile
 Val Ala Ala Asp Ser Lys Arg Gly Leu Ser His Pro Phe Ser Ile Asp
 Val Phe Glu Asp Tyr Ile Tyr Gly Val Thr Tyr Ile Asn Asn Arg Val
 Phe Lys Ile His Lys Phe Gly His Ser Pro Leu Val Asn Leu Thr Gly
 Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys Gln
 Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp Leu Cys
 Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn Gly Lys Arg
 Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro Thr Pro Pro Pro
 Asp Ala Pro Arg Pro Gly Thr Cys Asn Leu Gln Cys Phe Asn Gly Gly
 Ser Cys Phe Leu Asn Ala Arg Gln Pro Lys Cys Arg Cys Gln Pro

FIG. 14B

Arg Tyr Thr Gly Asp Lys Cys Glu Leu Asp Gln Cys Trp Glu His Cys
 225 4230 4235 4240
 Arg Asn Gly Gly Thr Cys Ala Ala Ser Pro Ser Gly Met Pro Thr Cys
 4245 4250 4255
 Arg Cys Pro Thr Gly Phe Thr Gly Pro Lys Cys Thr Gln Gln Val Cys
 4260 4265 4270
 Ala Gly Tyr Cys Ala Asn Asn Ser Thr Cys Thr Val Asn Gln Gly Asn
 4275 4280 4285
 Gln Pro Gln Cys Arg Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys Gln
 4290 4295 4300
 Tyr Arg Gln Cys Ser Gly Tyr Cys Glu Asn Phe Gly Thr Cys Gln Met
 305 4310 4315 4320
 Ala Ala Asp Gly Ser Arg Gln Cys Arg Cys Thr Ala Tyr Phe Glu Gly
 4325 4330 4335
 Ser Arg Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Glu Gly Ala Cys
 4340 4345 4350
 Val Val Asn Lys Gln Ser Gly Asp Val Thr Cys Asn Cys Thr Asp Gly
 4355 4360 4365
 Arg Val Ala Pro Ser Cys Leu Thr Cys Val Gly His Cys Ser Asn Gly
 4370 4375 4380
 Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln Cys Pro
 385 4390 4395 4400
 Pro His Met Thr Gly Pro Arg Cys Glu Glu His Val Phe Ser Gln Gln
 4405 4410 4415
 Gln Pro Gly His Ile Ala Ser Ile Leu Ile Pro Leu Leu Leu Leu Leu
 4420 4425 4430
 Leu Leu Val Leu Val Ala Gly Val Val Phe Trp Tyr Lys Arg Arg Val
 4435 4440 4445
 Gln Gly Ala Lys Gly Phe Gln His Gln Arg Met Thr Asn Gly Ala Met
 4450 4455 4460
 Asn Val Glu Ile Gly Asn Pro Thr Tyr Lys Met Tyr Glu Gly Gly Glu
 465 4470 4475 4480
 Pro Asp Asp Val Gly Gly Leu Leu Asp Ala Asp Phe Ala Leu Asp Pro
 4485 4490 4495
 Asp Lys Pro Thr Asn Phe Thr Asn Pro Val Tyr Ala Thr Leu Tyr Met
 4500 4505 4510
 Gly Gly His Gly Ser Arg His Ser Leu Ala Ser Thr Asp Glu Lys Arg
 4515 4520 4525
 Glu Leu Leu Gly Arg Gly Pro Glu Asp Glu Ile Gly Asp Pro Leu Ala
 4530 4535 4540

FIG. 14B